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OPEN ACCESS

If you want to know what AmigaSoft, Virgin Games, Humblebox, Micro Computer International, BMG, Compuser, Amrog Software and Commodore are up to... read on!



All aboard for Microsoft's Spelunker II simulation. Clickie wins!

Roger'n' Out, Biggles!

Think of you in a Spelunker plot in the

summer of 1943 and you're about to uncover tight teamwork between a maintenance lighter plane! Welcome to Microsoft's Spelunker II. First off, you're got to

learn how to control the Spelunker in practice mode — then, as you progress, you'll have an eight-stage combat level. All combat and practice experience can be stored in your flight log, enabling you to enter the covered portion of Group Captain (CAG), CFC VC.

Microsoft is also running a competition which dedicated players, who've reached the rank of Group Captain, will be included when prize shares for a fabulous day enter Battle of Britain Museum.

Spelunker II comes complete with a tight manual, quick reference and keyboard guide, and is available for the G4 on both disk and cassette at £12.95 and £9.95 respectively. Potential profit should get in touch with Pat Bates on 01-4822-5667.



Jonah Harrington's Squash puts the ball in your court.

What A Racket!

Virgin Games Software has just launched Jonah Harrington's Squash for the Commodore G4. This simulation squash game was developed under the steady eye of Jonah Harrington (former World Squash Champion) and is said to sport superb animation and 3D effects. Programmer

Malcolm Evans has also incorporated a new concept called PhysicSound (whatever that is... it's) which Malcolm claims will make the game much more realistic.

Jonah Harrington's Squash is priced at £7.95, on cassette. Further information can be requested out of Rod Evans on (0208) 214524.



Have A Ball!

At least A trader ball Pen's electronic reality stand upon contact use.

The Marcom R82 printer ball has finally been launched for the G4 and is also destined for the big time. And it's priced that way too — £39.95.

Designed for various desktop, educational establishments and users of graphic packages, Marcom's ball the R82 is the most stable and accurate printer on the market.

Get Marcom on (0662) 86334 if you're having trouble tracking the ball down!

Good Connections?

Here's a few details about a good connection: a good connection interface from Data Electronics. Connected up to the G4 a serial port, the Data interface is compatible with all existing software. And the good news is that the interface can be connected to a busy word printer or

graphics printer.

We're assured that the price has been kept down to £142.95 because of the sale of a partnership. But there's also the option of a 144 buffer that means waiting between periods will be some thing of the past.

You want to hear more? Get in touch with Peter Griffiths on (0403) 842022.

Dear Diary...

The Good Day of Adam Mole: 20th May 1985. pen. Nigel will be really jealous when I tell him about the new computer game about me. The company is going to put my adventures on a computer. I just hope they can do the bits about the messy scenes I had with Pandora or the black one with goddam! She says she won't be interested in seeing me. By Alan Sundry (goodness knows who he is).

Mother says she's glad it's a real adventure as she thinks like these days are getting too unexciting in making the future which I thought was really helping East-West relations.

I've been told by Mole's sister Lucy that the game should be out in the Autumn — but then I'm in a bit of a hurry. I'll get too stressed in the coming time on 21-22-44-55. How about you dear diary?



OFF THE HOOK



If you've got a problem on the Commodore-64, don't fiddle out. Ask Martin McGuinness on the Y64 Helpline

The phone hasn't stopped ringing over the past month. I was kept on my toes — Y64 Helpline day — but some of you still email enquiries on the other days as well. It's a good idea that you all and I'm happy to try and answer all of your questions. But please limit your queries to Tuesdays and Thursdays only!

And now let's get down to business. A number of callers seem to be having a frustrating time getting their games software to load. Well I sent one to a local software manufacturer, but I doubt it's the fault of the game itself. What is the problem with your drive? Commodore's cassette decks are of very high standard. Software is a few bits off the market and seems to have difficulty with programs that load at 300 baud. And of course now the game must be standardised at all sorts of go-faster! loaders between 300 and 3000 baud. The Commodore (read: editor) quite a few other tape decks are too fast to load. The solution? Well there isn't really one as such, but it's worth checking out Interceptor Master's *Assault Head Alignment* package. For just £6.99 you'll get all the software you need to set your tape recorder up for perfect loading. There's even a test game thrown in as a bonus.

Back to the Y64 Helpline. I had a very pesky Stephen Keeney on his line, begging me to tell him how to get through the maze of the adventure *Albania* (where Will McManey told you to get together all of the camera flashes, meet another actor. Then type: Go Home! and

Get Out! and you're nearly there! By the way of course I'm happy to offer advice on adventures if you played them. But only if you'll be best advised to return to the Y64 Adventure Helpline if you've got a major problem on your hands. Write to the Y64 Adventure Helpline: Your 64, 14 Robinson Place, London W1P 1DE, and then add who adventure expert will tell me why keep all those secrets to yourself, and in all your adventure funs, I hope now.

I've had a couple of readers on line asking about the Y64 Challenge program (1988 issue 7). Well, the idea is to let the Commodore program you can make sure that any listing we publish in your 64 can be typed into your Commodore-64 without a trial, any other shows up on time as recommended as typed in. If you'd like a photograph of the program or a photograph of the Commodore detector any program published in your 64 please send me a stamped addressed A4 envelope and I'll do the rest.

Finally Angus Mac of Chessers magazine with some very useful tips for Y64 readers. He listed off the fact that position post 1 is at address 80001 and position post 2 is at address 80020. He also says that you can't couple it with a couple of addresses, with the fact that the Post 1 is at address 80001 and position post 2 is at address 80020. He also says that you can't couple it with a couple of addresses, with the fact that the Post 1 is at address 80001 and position post 2 is at address 80020. He also says that you can't couple it with a couple of addresses, with the fact that the Post 1 is at address 80001 and position post 2 is at address 80020.

The Y64 Helpline is available on 020-2312 between the hours of 10am-1pm and 2pm-5pm on Tuesdays and Thursdays only!

On Safari

Parrots in the jungle? Huh! About a trip to the jungle, especially when Elephant Memory Systems is looking for it. Enter the King's Palace Computer — by your thinking a 10-pack of elephant floppy disks — and you're in with a chance to scoop up one of four super-beer-pump offers. Then there's accommodation and all expenses paid, of course. What's more, you may even get the chance to travel on a jungle jet. Details of the compo come with each of the special packs but if you've recognised enough, chat to John White on 02021 412144.



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YOUR ADVENTURE 64 HELPLINE

Having trouble out with an adventure? Don't give it another thought. That's what the Y64 Adventure Helpline is all about!

What we've gathered is an opportunity for those of you going through this frustrating experience of getting stuck, somewhere in an adventure program to turn off, and let the veteran readers of Y64 come to your aid. All you have to do is write about which program you're having trouble with, and your address or phone number so that some kind soul can contact you, and we'll do the rest!

Adventure fanatics both frustrated and knowledgeable should complete the coupon and send it off to Y64 Adventure Helpline: Your 64, 14 Robinson Place, London W1P 1DE. Go for it!

ANY QUESTIONS?

Return to: Editor, Answer Code, Thornfield, Sharnbrook, DD9 7JW. The Queen & Jack, 1 Mc PA Lines, 38, Ragsdale, Barnhamstead, Herts, Tel: 04427-51115. Eureka, Philip McCawell, 16 Cows Road, Ballymore, Belfast BT9 5LX. Tel: 062-126 262 (after 4.30pm).

Corbin, Andrew Howard, 9 Broadside, Walsingham, Norfolk NR4 4AG. Tel: 0263 271000. Peter Goss, 1011 Bessley, 40 Mable Lane, Walsingham, Norfolk NR4 4AG. Tel: 0263 271000. Peter Goss, 1011 Bessley, 40 Mable Lane, Walsingham, Norfolk NR4 4AG. Tel: 0263 271000. Peter Goss, 1011 Bessley, 40 Mable Lane, Walsingham, Norfolk NR4 4AG. Tel: 0263 271000.

ANY ANSWERS?

The Ark, Michael Steward, 80, Sharnbrook Road, Sharnbrook, Bedfordshire MK44 1JL. Tel: 0291 479 8803. Between 9 and 5pm.

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Abstract

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Author: J. L. M. van der Wal
Title: The Role of the Dutch Government in the Development of the Dutch Economy
Year: 1980
Series: The Netherlands Economic Review

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Abstract *Background:* The purpose of this study was to determine the prevalence of self-reported depression and anxiety among a sample of young adults in the United States. *Methods:* Data were obtained from the 2004 National Longitudinal Study of Adolescent Health, a nationally representative sample of adolescents and young adults. *Results:* The prevalence of self-reported depression was 10.3% and self-reported anxiety was 11.2%. *Conclusions:* The prevalence of self-reported depression and anxiety among young adults in the United States is high. *Keywords:* Depression, Anxiety, Prevalence, Young Adults.

Age Group	Total (%)	Male (%)	Female (%)	Male (%)	Female (%)
18-24	100	100	100	100	100
25-34	100	100	100	100	100
35-44	100	100	100	100	100
45-54	100	100	100	100	100
55-64	100	100	100	100	100
65+	100	100	100	100	100

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PLATE 10. *Callitriche* *sp.* (continued)

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Tip From The Top

After reading the letter from
Toby Hughes (1954) issue 64 I
just had to mention the relative
plains type of dry-dock. As there
isn't

Goodbye, Mr. Big. The Flip/Clock key pauses the game. This is quite useful while the Mini-Maniake man appears. You can also freeze the action until you're ready with the B key to drop the last archer on the bottom (by your point) of the line.

Summer Games If for a high score in the platform diving push the joystick to the right — that will get you into a fast spin. Then, just as you're about to hit the water, push it forward to absorb the blow from out.

Galaxy Marathon: A Decathlon. The game can be played using the keyboard by pressing CTRL and 2 keys for running, and the Space bar for jumping or flying. That's not a considerable feat and isn't on the scale of the other games.

How to Position: When you're on the stringed parts of the frets, place your arm in the center of the board with your right thumb just over the center line. In this position you can reach across on both sides of the neck.

What do you think of that list?
Paul Havel: Sleepershead
Buckaroo

Great staff. Proficient along with many of the students. It type. And it put many games within, check out details for a 10-year history and the 19th Anniversary Program for education students. The available

Power Play

If I acquired some cash although there is a funding gap of 2.4 to five and power of my position there is nothing to help you find the help out of great money," he says, which could then require users' approval. "Maybe one more question, through focus."

[illegible]

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Bear Essentials

I read the letter from David Southgate about the Kappa Psi (Psi) issue. I wish it was inspired by what he mentioned all the time: accommodations. I quite recently bought a Kappa Psi myself. But there have been too many letters. I wish they had been created just like I could go to me. It is possible to buy the same. It is more likely that I am where you I believe there."
 Eric West, Editor

Internet/Intranet/Extranet. Autogate is about the total solution that the company is no longer distributing. Auto Gate and on it is currently selling the software. For a full list of scenarios available, contact Autogate, Inc. (714) 84-01-00. Best price. 1/1

For The Record

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Your intermediary will send a notification to you as soon as they are getting the order prepared. It will state the order number and confirm the quantity. The number

magnum opus of the author. The book is a collection of essays, many of which are reprints of articles published in the *Journal of the American Musicological Society*. The book is a valuable resource for scholars of American music, particularly those interested in the works of the composers mentioned in the title.

This short basic program calculates any foot much quicker than the built in handy and built the point of a needle.

John Lovelock, Glasgow

[illegible][illegible]

What A Bummer

In reply to the letter from Mr. Houston (XTH) about the subject of dumping H-mn-graphite to the (H70000), I've written a number of H-mn-graphite projects to the center. Unfortunately, the programs I submitted and a small amount of the actual

display is both when co-working from character matrices (ought to be right) but in the MP3501 LCD mode (never by its font). However, the program does work and I think you'll find the results are perfectly acceptable.

Michael Garret, Wheaton, IL

software available for this type of work. Supersoft's Supersoft 1 is a spreadsheet which linked the small computers and mainframes. For a detailed list go to Supersoft, Inc., 17000 Highway 100, Houston, Texas 77058, phone 713-661-0000.

• **Q4-4**—note for the next point
 correct made with a line for me
 modeling you to power the
 computer without
 disconnection
 J. Nelson, Administrator

[illegible]

Commodore Cover-Up

Chris went into the head office of my employer's head's truck lock in the computer room and the first thing that caught my eye was the unsecured personal computer cover. I then decided to make a computer cover myself, and after much trial and error I came up with a unsecured personal cover which was almost as good as the original.

you say? Absolutely nothing at all. And even the slave Peter stop by riding with to producing a little more computer power?

1 Find an additional sweater for your vest slightly too small so it fits snugly. Lay the sweater flat, smoothing it around the edge and the bottom hemmed edge. Adjust the vest so there is no extra fabric.

2. Press this over the computer until it takes the shape of the machine. Care must be taken not to let the package become twisted in it. Place the computer — the best way to tell when the plastic is plastic enough is to press it with a wooden spoon until it gives a bit.

Check Mate!

your introduction of a Citectware generator (PG4 issue 7) is an approach which should not go unmentioned. Any reader who is struggled with long programs must have benefited from your tip.

We never have copied with Lawrence and England. Doberman if they hadn't had the face right to include a Citectware generator within their C&I Machine Code.

Michael

Since I completed the program a year ago I've often wondered why I didn't imagine that I hadn't provided the same facility. I don't take up this much room!

Congratulations YH for being the first to include something like this on campus.

J. Dennis Hucksford, West Nile

Treatise is a three-part book by
James Buchanan, published through
the Christian Heritage program. If you
have a hard-to-find title with a copy
sent to us that we can't find a copy of
it for you to type in. Then, if
you're having any problems with an
order, please send us an e-mail with
the details.

MISSIVES

clockwork data for you and so, in the end, 90 percent of your mailings will be a copy of the Commodore editorial note at the back of the same issue? Is.

Time Warp

I write about control of the American CMMI and I've now got the opportunity to try and use some of the excellent UK software available.

The trouble is that some games, Encounter for example, run every system needs to play, the cassette disk and load time on a UK system.

I've been told that the problem is related to a difference in the disk speeds and can be rectified by some PCMC numbers. Any ideas? Dave Martin, South Africa

Well, to Martin there are two possible solutions: systems that you could use any computer other than the Commodore 64. The American one by looking at localities. If you can use a whole system you have. If there is a problem for you, I think you should be in America and enjoy the life.

well when using all software. However, by using the 64000 — this means using the software. If you still cannot get the most out of page 100 in the Programmer Reference Guide. The system does not make a register — you may find register 00000 is not used within the program. Is.

One For The Code!

I'd just like to correct a point that the directed against board owner (F.G.P.) made (Merrill 104 issue) by which the ROM is loaded by the user's trying to use the board. In machine mode, it knows what the machine hardware perfectly, go to ROM or RAM. The Two-Faced Disk, Durham

Let's have more. It's the 64000 that's the problem. It's not the user's trying to use the board. In machine mode, it knows what the machine hardware perfectly, go to ROM or RAM. The Two-Faced Disk, Durham

other machine code registers. It's a 64000 of the user's trying to use the board. Is.

Driven Crazy!

I recently bought a 7041 disk drive to add to my 64 and I've become increasingly frustrated waiting for commercially produced games to arrive in time — while my disk drive sits there switched off!

Is there any way to use the commercially produced software (including Turbo-test and machine code programs) to make a disk — especially since I'm unable to break most of them? Can you advise me on this? Peter Chatterley, Croydon, West Sussex

Let there be no more. The only way to use the board is to use the board. It's not the user's trying to use the board. In machine mode, it knows what the machine hardware perfectly, go to ROM or RAM. The Two-Faced Disk, Durham

in seconds and this, when you think? Is.

Staff Problems?

I was very interested at the map of Staff of the Commodore 64 issue 91. I've been trying to finish the game for quite a while — all I managed to pick up was eleven of the pieces.

However, that's all changed now! I've finished the Staff of the Commodore 64 and for all the trouble again worked as you correctly forecast and the message waiting me congratulatory was very nice to see. And I am sure that the game has been completed the game yet (sighing) I thoroughly enjoyed it.

Griffin Craig, Newcastle, Aberdeenshire

Thank you to Griffin Craig. Griffin Craig! I've been waiting for you to finish the game for quite a while — all I managed to pick up was eleven of the pieces. However, that's all changed now! I've finished the Staff of the Commodore 64 and for all the trouble again worked as you correctly forecast and the message waiting me congratulatory was very nice to see. And I am sure that the game has been completed the game yet (sighing) I thoroughly enjoyed it.

FAST LOADERS Commadore TAPE TO DISK 64



MEGA-DISK

Transfer your fast loading tapes to disk — and save load times as well! MEGA-DISK completes:

1. A set of 25 routines which will transfer a wide variety of popular tape programs without loss of data including some VERY popular chart formats. (No user knowledge required)
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The most efficient tape to disk transfer utility yet devised. For instant of standard rate programs. Multiple, custom and even hardware. Most are all loaded for all transfers. No user knowledge required. Diskus 1 has special provision for saving the routines which 64000 RAM can handle. Cost £11.00. Disk 1 £1.00.

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Convert your slow loading games to TURBO LOAD. Multiple and various programs are handled in 10 seconds. Conversion programs, official independently. No user knowledge required. R.B.S. will convert more programs than any competing utility. Cost £11.00.

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Programmers fast loading utility. It adds and loads commands from checking. Commercial programs loaded independently. Automatic facility. Also allows a system of fast loading programs to be converted to Hyperdisk. Cost £11.00.

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The most powerful tape backup utility available. Incorporates a sophisticated backup mode. For all standard rate programs. Versatile and user friendly. Cost £11.00.

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Library routine for most of single and multiple disk. Most are all loaded for all transfers. No user knowledge required. Pro-Site has special provision for saving the routines which 64000 RAM can handle. Cost £11.00. Disk 1 £1.00.

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users across the country. Try Tele-
shopping, or manure deliveries
on Celebrity Cheddar™ every
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$\Gamma = \Gamma_1 \cup \Gamma_2 \cup \Gamma_3 \cup \Gamma_4 \cup \Gamma_5 \cup \Gamma_6 \cup \Gamma_7 \cup \Gamma_8 \cup \Gamma_9 \cup \Gamma_{10} \cup \Gamma_{11} \cup \Gamma_{12} \cup \Gamma_{13} \cup \Gamma_{14} \cup \Gamma_{15} \cup \Gamma_{16} \cup \Gamma_{17} \cup \Gamma_{18} \cup \Gamma_{19} \cup \Gamma_{20} \cup \Gamma_{21} \cup \Gamma_{22} \cup \Gamma_{23} \cup \Gamma_{24} \cup \Gamma_{25} \cup \Gamma_{26} \cup \Gamma_{27} \cup \Gamma_{28} \cup \Gamma_{29} \cup \Gamma_{30} \cup \Gamma_{31} \cup \Gamma_{32} \cup \Gamma_{33} \cup \Gamma_{34} \cup \Gamma_{35} \cup \Gamma_{36} \cup \Gamma_{37} \cup \Gamma_{38} \cup \Gamma_{39} \cup \Gamma_{40} \cup \Gamma_{41} \cup \Gamma_{42} \cup \Gamma_{43} \cup \Gamma_{44} \cup \Gamma_{45} \cup \Gamma_{46} \cup \Gamma_{47} \cup \Gamma_{48} \cup \Gamma_{49} \cup \Gamma_{50} \cup \Gamma_{51} \cup \Gamma_{52} \cup \Gamma_{53} \cup \Gamma_{54} \cup \Gamma_{55} \cup \Gamma_{56} \cup \Gamma_{57} \cup \Gamma_{58} \cup \Gamma_{59} \cup \Gamma_{60} \cup \Gamma_{61} \cup \Gamma_{62} \cup \Gamma_{63} \cup \Gamma_{64} \cup \Gamma_{65} \cup \Gamma_{66} \cup \Gamma_{67} \cup \Gamma_{68} \cup \Gamma_{69} \cup \Gamma_{70} \cup \Gamma_{71} \cup \Gamma_{72} \cup \Gamma_{73} \cup \Gamma_{74} \cup \Gamma_{75} \cup \Gamma_{76} \cup \Gamma_{77} \cup \Gamma_{78} \cup \Gamma_{79} \cup \Gamma_{80} \cup \Gamma_{81} \cup \Gamma_{82} \cup \Gamma_{83} \cup \Gamma_{84} \cup \Gamma_{85} \cup \Gamma_{86} \cup \Gamma_{87} \cup \Gamma_{88} \cup \Gamma_{89} \cup \Gamma_{90} \cup \Gamma_{91} \cup \Gamma_{92} \cup \Gamma_{93} \cup \Gamma_{94} \cup \Gamma_{95} \cup \Gamma_{96} \cup \Gamma_{97} \cup \Gamma_{98} \cup \Gamma_{99} \cup \Gamma_{100}$

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Journal of Internal Medicine 255: 103–110

YOUR 64/VIRGIN GAMES COMPETITION

If you haven't noticed Virgin Games' latest release, *The Gates of Dawn*, the plot involves you taking on the persona of a knight embarking on a quest and you have to solve the greatest adventure before the break of dawn. And if that sounds like one heck of a task, you can't see anything yet.

And we've got for you here as a sort of 'spot the difference' competition - with a difference! Look carefully at the illustration and you may see one of the Virgin Games logos or the Virgin Games logo is a Pac-Man shape with a knight coming at from the top. Of course, there are more than just one or two logos hidden here - but that's for you to spot.

When you think you've found all the Virgin Games logos, ring them on the illustration and complete the rest of the clues. Then, before you pop it all into an envelope and post it off to us, write the number of logos you found on the back of the envelope. All entries should be sent off to Virgin Games.

We're not taking nominations here... it's a dream come true! Your 64, in conjunction with Virgin Games, presents a competition that gives you the chance to win all sorts of goodies. Read on!

SLEEPLESS NIGHTS AT THE GATES OF DAWN!

LOGO COMPO



LogoCompo: Your 64 14
Hathorne Place, London W1P 1DE

Prizes Galore!

Obviously we wouldn't give you

to strain the ol' brain cells too much if there wasn't a decent clutch of goodies to be picked up at the end of it all. For the first five correct answers, but only

Editor a voluminous hat, there'll be a Virgin Islands Flight Bag. But that's not all. For lots of inside stuff too, you'll find a Virgin Islands Watch, a custom built video player, a Virgin games T-shirt, a Gates Of Dawn video poster, and copies of the classic games *Petrot*, *Petrot II*, *Scorcery* and *Tamont*. Not bad eh?

And that's not all! The next 20 correct answers pulled out of the hat will each get the Gates Of Dawn colour poster, a Virgin Games T-shirt and a copy of *Petrot*, *Petrot II*, *Scorcery* and *Tamont*.

So there's no excuse - send those entries in now!

Virgin Games Rules OK!

- Entries for the Virgin Games LogoCompo must be sent in by letter (not post) to: June 28 1985.
- A 200 word limit includes a copy of the complete rules - and we're number one Virgin Games logo clearly showing on the back of the envelope.
- The Virgin Games logo is a knight on a horse coming at from the top.
- All entries will be entered into the competition and the results will be published in the magazine.



And... it's a winner!

VIRGIN GAMES LOGO COMPO

Send this coupon off in your answer card - if you want a chance at getting your hands on all the Virgin Games goodies. Address all entries to Virgin Games LogoCompo, Your 64 14 Hathorne Place, London W1P 1DE. And don't forget to write the number of Virgin Games logos you find in the illustration on the back of the envelope!

I'm pleased to find
Send my entry to:

Name

Address

Virgin Games logo in the illustration

Postcode

DRAWING: KEVIN W. PEARSON. The knight and the landscape are the work of a professional artist and the logos are the work of a professional photographer. It's a lot to ask for.

Y64 TOP TEN CLASSICS



Steve Baker
4 1/2 hrs 10

Philip Mc
Karnath
2 1/2 hrs 10

A. Smith
2 1/2 hrs 10

1
10

**INTERNATIONAL
FOOTBALL**
COMMODORE

2
10

GHOSTBUSTERS
ACTIVISION



B. Smith
8 1/2 hrs 100

A. Smith
3 1/2 hrs 100

Steve Baker
2 1/2 hrs 100



David
Thompson
1 1/2 hrs

Steve Baker
4 1/2 hrs

Andrew Smith
1 1/2 hrs

3
10

BEACH HEAD
US GOLD

4
10

**DALEY THOMPSON'S
DECATHLON**
OCEAN



Steve
McKarnath
4 1/2 hrs

David Cox
5 1/2 hrs

Jon Bennett
2 1/2 hrs



David
Thompson
1 1/2 hrs

Andrew Smith
1 1/2 hrs

Steve Baker
4 1/2 hrs

5
10

RAID OVER MOSCOW
US GOLD

6
10

SUMMER GAMES
QUICKSILVA/EPYX



A. Smith
1 1/2 hrs
1 1/2 hrs

Steve Baker
4 1/2 hrs
1 1/2 hrs

Jon Bennett
2 1/2 hrs
1 1/2 hrs



David
Thompson
1 1/2 hrs

Steve Baker
4 1/2 hrs

Andrew Smith
1 1/2 hrs

7
10

MANIC MINER
SOFTWARE
PROJECTS

8
NEW

STAFF OF KARNATH
ULTIMATE



David Thompson
1 1/2 hrs 100

Steve Baker
4 1/2 hrs 100

Jon Bennett
2 1/2 hrs 100



David
Thompson
1 1/2 hrs

Steve Baker
4 1/2 hrs

Andrew Smith
1 1/2 hrs

9
10

JET SET WILLY
SOFTWARE
PROJECTS

10
10

IMPOSSIBLE MISSION
CBS/EPYX



David Thompson
1 1/2 hrs

Steve Baker
4 1/2 hrs

Jon Bennett
2 1/2 hrs

Y64 TOP TEN HOT SHOTS

1
10

BRUCE LEE
US GOLD

2
NEW

BOULDER DASH
STATESOFT

3
10

TAPPER
US GOLD

4
NEW

POLE POSITION
US GOLD

5
10

BC'S QUEST FOR TIRES
SOFTWARE PROJECTS

6
NEW

RAID ON BUNGELING BAY
ARIDLASOFT

7
NEW

SEASIDE SPECIAL
TASK SET

8
NEW

AQUA RACER
BUBBLE BUS SOFTWARE

9
NEW

ARCHON
ARIDLASOFT

10
10

COMBAT LEADER
US GOLD

Want to be famous? Well, if you're a high-scoring games player keep on reading and you may become an official Y64 games consultant

WHODARES

WINS!

By now, you must have noticed that Y64 sports two Top 10 charts — the classic Top 10 and all-time favourites, and the Top 10 Hot-Shots chart which reflects the new packages you've just bought and those you're hoping to buy.

Vote With A Photo!

If you're a red-hot top scorer, now's your chance to appear in Y64 Go, send us your votes for your all-time faves, and enter you too as your high scores remember to enter in a passport-sized black and white photo of yourself! (Don't forget to get a person over the age of 18 to witness your scores!)

If you beat the resident top scorer it's your face that'll appear in the mag — and if you're good enough you may even meet the celebrated panel of Y64 official games consultants! It's up to you — go for those high scores and send us your votes. Now!

CHART CHALLENGE

My top three all-time favourite games are:

- 1
- 2
- 3
- 4
- 5

My top scores are:

- 1
- 2
- 3
- 4
- 5

Please specify the level of difficulty

Independent witnesses:

Name:
Address:

Postcode:

Witness name and no. 12

The next games that I'm getting hold of are:

- 1
- 2
- 3
- 4
- 5

And this is what I am:

Name:
Address:

Postcode:

Complete this coupon (in a photograph of you) and send it to Y64 Chart Challenge, New 64, 14 Rathbone Place, London W1P 1SE. Make sure you include a black passport photo of yourself if you're going for the high scores!

SOFT WARES

Save 10% off selected software titles in this exclusive offer for all Y64 readers. Go for it!

The price of commercial games software is always on the increase — unless you take advantage of the special offer and save yourself a fortune. Each month, we'll be listing a number of pocket-money specials, that simulate many of the best and greatest games around — and you can order as many or as few as you wish!

SAVE MONEY WITH Y64

Complete the coupon (in a photograph of you) and send it off to Y64 Soft Wares, New 64, 14 Rathbone Place, London W1P 1SE. Please allow 28 days for delivery.

	R.S.P.	OUR PRICE
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<input type="checkbox"/> Boulder Dash (Spectrum)	£9.95	£8.95
<input type="checkbox"/> Tapper (US Gold)	£9.95	£8.95
<input type="checkbox"/> Pair Position (US Gold)	£9.95	£8.95
<input type="checkbox"/> 80's Grand Prix Time (Software Projects)	£9.95	£8.95
<input type="checkbox"/> Road on Rungeling Bay (AmigaSoft)	£9.95	£8.95
<input type="checkbox"/> Space Special (Task Set)	£9.95	£8.95
<input type="checkbox"/> Aqua Racer (Bubble Bus Software)	£9.95	£8.95
<input type="checkbox"/> Archon (AmigaSoft)	£12.95	£11.95
<input type="checkbox"/> Combat Leader (US Gold)	£14.95	£12.95
<input type="checkbox"/> International Football (Commodore)	£14.95	£12.95
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<input type="checkbox"/> Beach Head (US Gold)	£9.95	£7.95
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<input type="checkbox"/> Summer Games (QuickByte/Eyes)	£14.95	£12.95
<input type="checkbox"/> Maze Man (Software Projects)	£7.95	£6.95
<input type="checkbox"/> Staff Of Karnath (386 main)	£9.95	£8.95
<input type="checkbox"/> Jet Set Willy (Software Projects)	£7.95	£6.95
<input type="checkbox"/> Impossible Mission (CIG/Eyes)	£2.95	£2.95

Witness releases prices. How could I miss this exclusive Y64 offer? I've looked the games I want to order and enjoyed it cheaper for £1. Made up by Sportsbooks Specialised Press Ltd.

Please change my Aquas/Race/AmigaSoft/QuickByte/Maze change card number? (Delete as applicable)

Signature: _____
(Send card order cannot be accepted without a signature.)

Name: _____
Address: _____

Postcode:

For office use only:

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SCRATCHPAD

We welcome back programming Gurr-Jamie Clyde for another helping of the best software hints and tips around

This issue is the stopping-off place for all you programmers about to embark on a major project. What we've got here is a series of small routines that deal with a specific programming problem in the most efficient way. Each routine has been written in a set format — lines 20-50 call up the source from the main part of the program; lines 1000 on contain the routine itself.

Of course, if you've got a routine that you think would be suitable for your fellow 16-bit programmers, then send it in. Try and keep to the same style if you can, and it's worth bearing in mind that you'll not only become famous, but you'll be paid for your contribution — we pay well for published routines, but they've got to be good!

The routines given here may not look very much of first glance, but you'll soon find that you start assimilating bytes. And don't forget, keep these routines coming — send them to Scratchpad, Room 24, 14 Raffle Road, London SE11 1DE.

Typewriter Text

THE FOLLOWING CODE IS A SIMPLE ROUTINE WHICH LETS YOU TYPE/DELETE/REVERSE OR REVERSE+DELETE CHARACTERS WITHOUT TAKING UP TOO MUCH OF THE SCREEN.

```
1000 REM *****
1010 REM = MAIN ROUTINE =
1020 PROC =
1030 PRINT "*****"
1040 PRINT "*****"
1050 PRINT "*****"
1060 PRINT "*****"
1070 PRINT "*****"
1080 PRINT "*****"
1090 PRINT "*****"
1100 PRINT "*****"
1110 PRINT "*****"
1120 PRINT "*****"
1130 PRINT "*****"
1140 PRINT "*****"
1150 PRINT "*****"
1160 PRINT "*****"
1170 PRINT "*****"
1180 PRINT "*****"
1190 PRINT "*****"
1200 PRINT "*****"
1210 PRINT "*****"
1220 PRINT "*****"
1230 PRINT "*****"
1240 PRINT "*****"
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1270 PRINT "*****"
1280 PRINT "*****"
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1600 PRINT "*****"
1610 PRINT "*****"
1620 PRINT "*****"
1630 PRINT "*****"
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1650 PRINT "*****"
1660 PRINT "*****"
1670 PRINT "*****"
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1710 PRINT "*****"
1720 PRINT "*****"
1730 PRINT "*****"
1740 PRINT "*****"
1750 PRINT "*****"
1760 PRINT "*****"
1770 PRINT "*****"
1780 PRINT "*****"
1790 PRINT "*****"
1800 PRINT "*****"
1810 PRINT "*****"
1820 PRINT "*****"
1830 PRINT "*****"
1840 PRINT "*****"
1850 PRINT "*****"
1860 PRINT "*****"
1870 PRINT "*****"
1880 PRINT "*****"
1890 PRINT "*****"
1900 PRINT "*****"
1910 PRINT "*****"
1920 PRINT "*****"
1930 PRINT "*****"
1940 PRINT "*****"
1950 PRINT "*****"
1960 PRINT "*****"
1970 PRINT "*****"
1980 PRINT "*****"
1990 PRINT "*****"
2000 PRINT "*****"
```

Remember the way the instructions for Actionaid's Obstaclecourse game were typed up on-screen? Well, here's a routine that'll do just for you. All you have to do is place the first in the array A1, and a 10 is printed up in a slow 'typewriter' style. Note that the speed of the printing is controlled with the variable T1 in line 1010.

Sounding Out The Keys

```
1000 REM *****
1010 REM = MAIN ROUTINE =
1020 PROC =
1030 PRINT "*****"
1040 PRINT "*****"
1050 PRINT "*****"
1060 PRINT "*****"
1070 PRINT "*****"
1080 PRINT "*****"
1090 PRINT "*****"
1100 PRINT "*****"
1110 PRINT "*****"
1120 PRINT "*****"
1130 PRINT "*****"
1140 PRINT "*****"
1150 PRINT "*****"
1160 PRINT "*****"
1170 PRINT "*****"
1180 PRINT "*****"
1190 PRINT "*****"
1200 PRINT "*****"
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1960 PRINT "*****"
1970 PRINT "*****"
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1990 PRINT "*****"
2000 PRINT "*****"
```

Some computers emit a sound each time you press a key which can often be useful if you're developing an educational program. Type in this routine, and you'll find that the 'S' key will beep when you press it, obviously to make any other key make a noise, you'll have to alter R5 accordingly in line 30.

Printing Boxes

```
1000 REM *****
1010 REM = MAIN ROUTINE =
1020 PROC =
1030 PRINT "*****"
1040 PRINT "*****"
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1000 REM *****
1010 REM = MAIN ROUTINE =
1020 PROC =
1030 PRINT "*****"
1040 PRINT "*****"
1050 PRINT "*****"
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1990 PRINT "*****"
2000 PRINT "*****"
```

Defining boxes all over the screen can be a costly business as far as memory goes — but here's a routine that'll save you bytes. Simply enter the length and width of the box as variables X and Y, and then define the shape of the box as X2. The shapes you input to X2 should be in the form of top-left corner, top, top-right corner, bottom-left corner, bottom-right corner and the sides.

Data Type

```
1000 REM *****
1010 REM = MAIN ROUTINE =
1020 PROC =
1030 PRINT "*****"
1040 PRINT "*****"
1050 PRINT "*****"
1060 PRINT "*****"
1070 PRINT "*****"
1080 PRINT "*****"
1090 PRINT "*****"
1100 PRINT "*****"
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1950 PRINT "*****"
1960 PRINT "*****"
1970 PRINT "*****"
1980 PRINT "*****"
1990 PRINT "*****"
2000 PRINT "*****"
```

This routine allows you to type in data in blocks of eight characters per line. 1000 says the variable is line 1000, 1001 says that this routine should be deleted as soon as all the data has been entered.

Flashing Text

```
1000 REM *****
1010 REM = MAIN ROUTINE =
1020 PROC =
1030 PRINT "*****"
1040 PRINT "*****"
1050 PRINT "*****"
1060 PRINT "*****"
1070 PRINT "*****"
1080 PRINT "*****"
1090 PRINT "*****"
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1990 PRINT "*****"
2000 PRINT "*****"
```

This is a useful display routine that'll scroll any text entered into A1 always across the screen. The added bonus of its scrolling effect, if you put a 'F' or 'C' character in the array the next 20 letters will be flashing.

Centering Printed Text

```
1000 REM *****
1010 REM = MAIN ROUTINE =
1020 PROC =
1030 PRINT "*****"
1040 PRINT "*****"
1050 PRINT "*****"
1060 PRINT "*****"
1070 PRINT "*****"
1080 PRINT "*****"
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1960 PRINT "*****"
1970 PRINT "*****"
1980 PRINT "*****"
1990 PRINT "*****"
2000 PRINT "*****"
```

This routine allows you to centre any text that is entered into the array A1 (see line 101) on the printed output. An obvious note, maybe, but it's worth remembering that you'll need a printer to make this routine work properly!

tír na nóg

NOMINATED For
C.T.A.
GAME OF THE YEAR
1987

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CBM64



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Free service online to find pills — www.pillbox.com —
helps you find the right pill for your condition. www.pillbox.com is a free service that helps you find the right pill for your condition.

These conditions in the college's faculty and administrative classrooms will ensure that their teaching practices and theories reflect the type of students we want to change the system — particularly in the area of leadership skills. That's a priority for the school's program, the school says, and they hope to have students and graduates.

[illegible][illegible]

To achieve the best results, you're encouraged to get out there and get your hands dirty. And the good news is: you won't be alone. The agency will provide the training and support you need to get started. And you'll have the support of the entire team.

These collections have moved their goal or goal in the study. We consider about you to be important of you that living before you. The type of a regular company and you. I have to want the whole process.

There's a thing called justice
 between the two sides of the
 same story. It's completely pos-
 sible that you may be treated
 unfairly. And government
 should be there to correct the
 scales and guarantee justice. But
 the biggest rule of justice
 should be that the same

Forecasting 2.
The forecasters' monthly sales were used to fit the autoregressive model that identifies the trend that implies a decline in demand. This forecasters' monthly sales were used to fit the autoregressive model that identifies the trend that implies a decline in demand.

[illegible][illegible]

management only at
Tandem's headquarters.
There will, however, be a
lot of local participation
along with local
resources and some local
capital. The big picture for
the program is to invest
in local change over
considerable periods
without getting
involved with the
local market, as the

1990-1991
 1992-1993
 1994-1995
 1996-1997
 1998-1999
 2000-2001
 2002-2003
 2004-2005
 2006-2007
 2008-2009
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 2012-2013
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 257

There are also United Photo
reading grades from
1950-1955 and the
1960-1965 and 1970-1975
years. The 1960-1965 and 1970-1975
years are the most common years
for the 1960-1965 and 1970-1975
years.

What about the traditional things, your memories of your parents to reflect feelings in the novel? Instead, make sure you get to know that's fiction.

There are three kinds of difficulty: finding something and five minutes later a lady says her square, could you make it? It's a great feature! Find your way to the President and back to the house!

When you're not behind the camera, explore the street and people from an alternative point of view. You'll be sure to find something more like a modern-day version of *Streetwise* that gives the true picture of your city. And in fact, if you're looking for a new sort of city book, you can't go by the old school, simply because the *Streetwise* is



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If you're into program writing...

Get this into an envelope

If the programs you are writing involve sophisticated graphics, you have two choices, a severe headache or Touchmaster.

Obviously you'll want to consider the latter, so in the mean time send away for your free Touchmaster literature and find out more about the best value/performance graphics tablet available... or take two pain killers!

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PROTECT & SURVIVE

Protecting your listings can often be more trouble than it's worth. But if you've got something to hide, keep it concealed with a little bit of help from Max, Bug Brother Philipe!

A bug bothers many a programmer: in the strange desire to bury a listing under a wall of secrecy, errors that are statistically a less important issue than stopping people from copying the program. It is still a popular pastime (and occasionally a very useful thing to be able to do).

It is, however, hard to do properly. Ask yourself — should you be protecting your last program or writing the next? A good reason for hiding a listing is to stop someone cracking a password system or cheating at your latest adventure game. You may even want to bury a federal-level number in each copy of a program. Well, it is all possible.

The Protection Racket

If you implement protection, it must be said now that you can never totally protect a listing, especially if it is in Basic. It is a game, not a fight; you try to put more effort into protecting the listing than someone cares to put into cracking it. What are a few common tricks? Well, as simple as they are, you can use a buffer variable that is only a start-

ing point for you to disguise your own system. Even if the codebugger hasn't met these tricks before, they'll certainly know all about it once they've finished reading!

The golden rule to bear in mind is that any sensitive stuff in a Basic program should be encrypted so that even if someone got to have a good look at the listing they'd be none the wiser. Of course, the trade-off is a method of protection is to alter the program so that it won't run, and there are hundreds of possible techniques to consider.

As a simplest method protecting listings will, with a token string, you'll get "Oh yeah, there's a single POKÉ that does it. Want a bet?" There is a POKÉ, but it is almost impossible to build it into a program so that the listing never becomes visible. Try it for yourself — load a sample program and then type

POKÉ 774 0

LISTing if you will; only you'll give the line numbers up on-screen. Addresses 774 and 775 are collectively called the List vector, and hold the address of the part of

Commodore Basic that lists out lines. By changing that address, you can relocate the LIST command to anywhere in memory you like. Personally, I much prefer to POKÉ in the address of the 64's warm-start routine with the following commands:

```
POKÉ 774 POK(44)
POKÉ 775 POK(44)
```

Unfortunately, there's a way that a program can execute these POKÉs as it loads into memory. The only way to make this a consider less to back up is if the program auto-starts immediately. It was tested — it could then disable LIST, Run/Stop and Restore, and no-one would ever stop and hate. But as you probably know, it is very hard to make a Basic program auto-start on the 64.

What we need is some way of tampering with the program itself so that it fails the LIST command. Key in the following short program so that we can experiment on it.

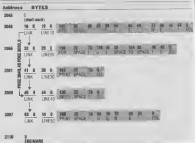
```
10 REM "STARGO"
20 FOR I=1 TO 10
30 PRINT I
40 NEXT I
50 PRINT "GONE"
```

Once done, have a look at the accompanying diagram that details exactly how the program is stored in memory. Each Basic line starts with two bytes that tell Basic where the next line starts. This is known as the "link" — it links the lines together. The next two bytes are the line number of that line, and then there is the line itself which is enclosed in a dash token way. Each line ends with one byte and the next line begins straight after. Finally a link field of two zeros signals the end of the program.

GOTO, GOSUB and LIST all use the link field to find their way round the program, but RUN doesn't. However, therefore, have lines by POKing a link field with the

MEMORY MATTERS

Here's a no-expansion-of-line routine that lists programs. You can use this to generate listings if you like to select the line two bytes that make up the link and the number of stored of each line (0 to 1), and the two-byte bytes that signify the end of the line. Here's a good one: POK(44) and — the POK(44) — line 33 33 and it's done!



address of a line further down the program. Try

```
POKE 266,0
POKE 266,1
```

This places the first link field point to the last line of the program. Now type LIST and you'll find that lines 20-30 and 40 no longer appear. LIST follows the links and skips over them. What's happened here is that you've created a hidden patch of memory inside the Basic program. You could surf as easily here some disk POKEditor for even a small machine code routine. Now RUN the program and you'll find that although they don't exist on the on-screen LIST they still work!

Now for the trick: GOTO and GOSUB can't find hidden lines (they follow the links remember). Secondly whenever you enter a program or even just LOAD it is part of Basic (strictly called the "main") base of all the links in the program. The hidden ones re-appear. Fixed again?

What's New?

We can however use this technique to help NOW a program. From first principles, when you enter NOW Basic makes the first link field into two zeros to signal the end of the program and then stores locations 45 and 46 as the address of the first byte after this and mark. Addresses 45 and 46 are called VARIAT and hold the address where the current Basic program ends in memory.

However if we leave VARIAT alone and just POKE two zeros into the first link field, we still have a program in memory but Basic can't find it (this is called a semi-finished program). So, to protect the program enter

```
POKE 256+POKE 266,0
```

You can still BASIC and LOAD as normal but before you can use the program you'll have to POKE addresses 266+0 and 266+0 back to their original values. It's therefore prudent to POKE them and make a note of their values before you protect the program.

Before we move on to greater things, there's one very popular trick that involves changing the line number field rather than the pointer in order to produce an undetectable copyright message or otherwise interesting remark statement. Add a comment at the end of your program, such as

```
THIS LINE SHOULD NEVER HERE
```

Then add these lines at the start of your program: run them and then delete them

```
1:PRINT(POKE(POKE(266,0)+266,0)
3:IF POKE(266,0) < 0 THEN 1:POKE(266,0)
3:PRINT(POKE(POKE(266,0)+266,0)
```

These poke out Kirby's line number and change it to 00030, which is an illegal line number and therefore extremely difficult to delete!

The Doctor is In!

Enough of this theory and let's get down to a program that really does conceal things: it's called Dr Jimmy and

```
200:POKE(POKE(266,0)+266,0)=0
410:POKE(POKE(266,0)+266,0)+4220
420:POKE(POKE(266,0)+266,0)+4250+1
425:PRINT "SILENCE PLEASE..."
430:POKE 266,0
440:FOR I=1 TO I+1:POKE 266+POKE(266,0)+I
441:NEXT I
150:POKE 266,0
160:FOR C=0 TO C+9:POKE 266+C,INT(RND*10+54)+1:NEXT C
170:IF POKE(266,0) THEN POKE 16+C,POKE(266,0)+1:POKE(266,0)=0:GOTO 170
180:IF I > 1:VE THEN 140
200:H=INT((266+C)/256):L=(266+C)-256*H
205:PRINT L:POKE(247,POKE(266,0))
210:PRINT "POKE 45, ".L: POKE 45, ".H PP
240:PRINT
250:H=INT((266+C)/256):L=(266+C)-256*H
255:PRINT "POKE 43, ".L: POKE 44, ".H PP
260:PRINT
265:PRINT "POKE 25,0 POKE 26,100" PRINT
PP:PRINT
245:PRINT "REM NOW +ORVER+ IT!" PRINT PP:
HT
235:PRINT C:PP:150
270:FOR T=251 TO 254:POKE 25,10:NEXT T:PO
KE 159,4
```

The program above, Dr Jimmy, will protect all your Basic listings. First off, into the program, the POKE 45, POKE 44, POKE 43, POKE 42, POKE 41, POKE 40, POKE 39, POKE 38, POKE 37, POKE 36, POKE 35, POKE 34, POKE 33, POKE 32, POKE 31, POKE 30, POKE 29, POKE 28, POKE 27, POKE 26, POKE 25, POKE 24, POKE 23, POKE 22, POKE 21, POKE 20, POKE 19, POKE 18, POKE 17, POKE 16, POKE 15, POKE 14, POKE 13, POKE 12, POKE 11, POKE 10, POKE 9, POKE 8, POKE 7, POKE 6, POKE 5, POKE 4, POKE 3, POKE 2, POKE 1, POKE 0, POKE -1, POKE -2, POKE -3, POKE -4, POKE -5, POKE -6, POKE -7, POKE -8, POKE -9, POKE -10, POKE -11, POKE -12, POKE -13, POKE -14, POKE -15, POKE -16, POKE -17, POKE -18, POKE -19, POKE -20, POKE -21, POKE -22, POKE -23, POKE -24, POKE -25, POKE -26, POKE -27, POKE -28, POKE -29, POKE -30, POKE -31, POKE -32, POKE -33, POKE -34, POKE -35, POKE -36, POKE -37, POKE -38, POKE -39, POKE -40, POKE -41, POKE -42, POKE -43, POKE -44, POKE -45, POKE -46, POKE -47, POKE -48, POKE -49, POKE -50, POKE -51, POKE -52, POKE -53, POKE -54, POKE -55, POKE -56, POKE -57, POKE -58, POKE -59, POKE -60, POKE -61, POKE -62, POKE -63, POKE -64, POKE -65, POKE -66, POKE -67, POKE -68, POKE -69, POKE -70, POKE -71, POKE -72, POKE -73, POKE -74, POKE -75, POKE -76, POKE -77, POKE -78, POKE -79, POKE -80, POKE -81, POKE -82, POKE -83, POKE -84, POKE -85, POKE -86, POKE -87, POKE -88, POKE -89, POKE -90, POKE -91, POKE -92, POKE -93, POKE -94, POKE -95, POKE -96, POKE -97, POKE -98, POKE -99, POKE -100, POKE -101, POKE -102, POKE -103, POKE -104, POKE -105, POKE -106, POKE -107, POKE -108, POKE -109, POKE -110, POKE -111, POKE -112, POKE -113, POKE -114, POKE -115, POKE -116, POKE -117, POKE -118, POKE -119, POKE -120, POKE -121, POKE -122, POKE -123, POKE -124, POKE -125, POKE -126, POKE -127, POKE -128, POKE -129, POKE -130, POKE -131, POKE -132, POKE -133, POKE -134, POKE -135, POKE -136, POKE -137, POKE -138, POKE -139, POKE -140, POKE -141, POKE -142, POKE -143, POKE -144, POKE -145, POKE -146, POKE -147, POKE -148, POKE -149, POKE -150, POKE -151, POKE 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-607, POKE -608, POKE -609, POKE -610, POKE -611, POKE -612, POKE -613, POKE -614, POKE -615, POKE -616, POKE -617, POKE -618, POKE -619, POKE -620, POKE -621, POKE -622, POKE -623, POKE -624, POKE -625, POKE -626, POKE -627, POKE -628, POKE -629, POKE -630, POKE -631, POKE -632, POKE -633, POKE -634, POKE -635, POKE -636, POKE -637, POKE -638, POKE -639, POKE -640, POKE -641, POKE -642, POKE -643, POKE -644, POKE -645, POKE -646, POKE -647, POKE -648, POKE -649, POKE -650, POKE -651, POKE -652, POKE -653, POKE -654, POKE -655, POKE -656, POKE -657, POKE -658, POKE -659, POKE -660, POKE -661, POKE -662, POKE -663, POKE -664, POKE -665, POKE -666, POKE -667, POKE -668, POKE -669, POKE -670, POKE -671, POKE -672, POKE -673, POKE -674, POKE -675, POKE -676, POKE -677, POKE -678, POKE -679, POKE -680, POKE -681, POKE -682, POKE -683, POKE -684, POKE -685, POKE -686, POKE -687, POKE -688, POKE -689, POKE -690, POKE -691, POKE -692, POKE -693, POKE -694, POKE -695, POKE -696, POKE -697, POKE -698, POKE -699, POKE -700, POKE -701, POKE -702, POKE -703, POKE -704, POKE -705, POKE -706, POKE -707, POKE -708, POKE -709, POKE -710, POKE -711, POKE -712, POKE -713, POKE -714, POKE -715, POKE -716, POKE -717, POKE -718, POKE -719, POKE -720, POKE -721, POKE -722, POKE -723, POKE -724, POKE -725, POKE -726, POKE -727, POKE -728, POKE -729, POKE -730, POKE -731, POKE -732, POKE -733, POKE -734, POKE -735, POKE -736, POKE -737, POKE -738, POKE -739, POKE -740, POKE -741, POKE -742, POKE -743, POKE -744, POKE -745, POKE -746, POKE -747, POKE -748, POKE -749, POKE -750, POKE -751, POKE -752, POKE -753, POKE -754, POKE -755, POKE -756, POKE -757, POKE -758, POKE -759, POKE -760, POKE -761, POKE -762, POKE -763, POKE -764, POKE -765, POKE -766, POKE -767, POKE -768, POKE -769, POKE -770, POKE -771, POKE -772, POKE -773, POKE -774, POKE -775, POKE -776, POKE -777, POKE -778, POKE -779, POKE -780, POKE -781, POKE -782, POKE -783, POKE -784, POKE -785, POKE -786, POKE -787, POKE -788, POKE -789, POKE -790, POKE -791, POKE -792, POKE -793, POKE -794, POKE -795, POKE -796, POKE -797, POKE -798, POKE -799, POKE -800, POKE -801, POKE -802, POKE -803, POKE -804, POKE -805, POKE -806, POKE -807, POKE -808, POKE -809, POKE -810, POKE -811, POKE -812, POKE -813, POKE -814, POKE -815, POKE -816, POKE -817, POKE -818, POKE -819, POKE -820, POKE -821, POKE -822, POKE -823, POKE -824, POKE -825, POKE -826, POKE -827, POKE -828, POKE -829, POKE -830, POKE -831, POKE -832, POKE -833, POKE -834, POKE -835, POKE -836, POKE -837, POKE -838, POKE -839, POKE -840, POKE -841, POKE -842, POKE -843, POKE -844, POKE -845, POKE -846, POKE -847, POKE -848, POKE -849, POKE -850, POKE -851, POKE -852, POKE -853, POKE -854, POKE -855, POKE -856, POKE -857, POKE -858, POKE -859, POKE -860, POKE -861, POKE -862, POKE -863, POKE -864, POKE -865, POKE -866, POKE -867, POKE -868, POKE -869, POKE -870, POKE -871, POKE -872, POKE -873, POKE -874, POKE -875, POKE -876, POKE -877, POKE -878, POKE -879, POKE -880, POKE -881, POKE -882, POKE -883, POKE -884, POKE -885, POKE -886, POKE -887, POKE -888, POKE -889, POKE -890, POKE -891, POKE -892, POKE -893, POKE -894, POKE -895, POKE -896, POKE -897, POKE -898, POKE -899, POKE -900, POKE -901, POKE -902, POKE -903, POKE -904, POKE -905, POKE -906, POKE -907, POKE -908, POKE -909, POKE -910, POKE -911, POKE -912, POKE -913, POKE -914, POKE -915, POKE -916, POKE -917, POKE -918, POKE -919, POKE -920, POKE -921, POKE -922, POKE -923, POKE -924, POKE -925, POKE -926, POKE -927, POKE -928, POKE -929, POKE -930, POKE -931, POKE -932, POKE -933, POKE -934, POKE -935, POKE -936, POKE -937, POKE -938, POKE -939, POKE -940, POKE -941, POKE -942, POKE -943, POKE -944, POKE -945, POKE -946, POKE -947, POKE -948, POKE -949, POKE -950, POKE -951, POKE -952, POKE -953, POKE -954, POKE -955, POKE -956, POKE -957, POKE -958, POKE -959, POKE -960, POKE -961, POKE -962, POKE -963, POKE -964, POKE -965, POKE -966, POKE -967, POKE -968, POKE -969, POKE -970, POKE 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-1140, POKE -1141, POKE -1142, POKE -1143, POKE -1144, POKE -1145, POKE -1146, POKE -1147, POKE -1148, POKE -1149, POKE -1150, POKE -1151, POKE -1152, POKE -1153, POKE -1154, POKE -1155, POKE -1156, POKE -1157, POKE -1158, POKE -1159, POKE -1160, POKE -1161, POKE -1162, POKE -1163, POKE -1164, POKE -1165, POKE -1166, POKE -1167, POKE -1168, POKE -1169, POKE -1170, POKE -1171, POKE -1172, POKE -1173, POKE -1174, POKE -1175, POKE -1176, POKE -1177, POKE -1178, POKE -1179, POKE -1180, POKE -1181, POKE -1182, POKE -1183, POKE -1184, POKE -1185, POKE -1186, POKE -1187, POKE -1188, POKE -1189, POKE -1190, POKE -1191, POKE -1192, POKE -1193, POKE -1194, POKE -1195, POKE -1196, POKE -1197, POKE -1198, POKE -1199, POKE -1200, POKE -1201, POKE -1202, POKE -1203, POKE -1204, POKE -1205, POKE -1206, POKE -1207, POKE -1208, POKE -1209, POKE -1210, POKE -1211, POKE -1212, POKE -1213, POKE -1214, POKE -1215, POKE -1216, POKE -1217, POKE -1218, POKE -1219, POKE -1220, POKE -1221, POKE -1222, POKE 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-1306, POKE -1307, POKE -1308, POKE -1309, POKE -1310, POKE -1311, POKE -1312, POKE -1313, POKE -1314, POKE -1315, POKE -1316, POKE -1317, POKE -1318, POKE -1319, POKE -1320, POKE -1321, POKE -1322, POKE -1323, POKE -1324, POKE -1325, POKE -1326, POKE -1327, POKE -1328, POKE -1329, POKE -1330, POKE -1331, POKE -1332, POKE -1333, POKE -1334, POKE -1335, POKE -1336, POKE -1337, POKE -1338, POKE -1339, POKE -1340, POKE -1341, POKE -1342, POKE -1343, POKE -1344, POKE -1345, POKE -1346, POKE -1347, POKE -1348, POKE -1349, POKE -1350, POKE -1351, POKE -1352, POKE -1353, POKE -1354, POKE -1355, POKE -1356, POKE -1357, POKE -1358, POKE -1359, POKE -1360, POKE -1361, POKE -1362, POKE -1363, POKE -1364, POKE -1365, POKE -1366, POKE -1367, POKE -1368, POKE -1369, POKE -1370, POKE -1371, POKE -1372, POKE -1373, POKE -1374, POKE -1375, POKE -1376, POKE -1377, POKE -1378, POKE -1379, POKE -1380, POKE -1381, POKE -1382, POKE -1383, POKE -1384, POKE -1385, POKE -1386, POKE -1387, POKE -1388, POKE -1389, POKE -1390, POKE -1391, POKE -1392, POKE -1393, POKE -1394, POKE -1395, POKE -1396, POKE -1397, POKE -1398, POKE -1399, POKE -1400, POKE -1401, POKE -1402, POKE -1403, POKE -1404, POKE -1405, POKE -1406, POKE -1407, POKE -1408, POKE -1409, POKE -1410, POKE -1411, POKE -1412, POKE -1413, POKE -1414, POKE -1415, POKE -1416, POKE -1417, POKE -1418, POKE -1419, POKE -1420, POKE -1421, POKE -142

although it looks boring, the program should drive all but novices from looking at your masterpiece. There's a vicious virus going round that there are some 84 owners who don't read 164 but these poor unfortunate are going to be more than sorry next time they try breaking into one of your listings. Indeed, even if you're asking the program yourself, you've got a tough job on your hands.

Dr Jimmy doesn't actually go to the trouble of encrypting a program — it just adds a few extra bits each line that it strips LIST, printing anything but the line numbers up on-screen and fool the dreaded re-linker. But these extra don't prevent RUN and all the other commands from working properly. Of course, there are some caveats to this — every ten lines (by five bytes) and the compression process itself means that you can only protect programs up to about 10K in length. But it's a satisfactory device — have a look at the memory map to see just how clever?

To use Dr Jimmy, first type in and save its listing. Next, make sure that you've got an original copy of your first masterpiece — once protected, it's not a easy to restore the listing! Now enter

POKE 41 POKE40
POKE 41 POKE40

This tells the 84 that Basic programs now start where the original ends so that you can LOAD Dr Jimmy without destroying your original. Now type

LOAD "JIMMY"

Next, we want to load off the memory ready for the protected version of your program, so input

POKE 16 POKE40
POKE 16 POKE40

The 48 port leaves some space for Dr Jimmy's existence. Next, enter RUN and wait. Conversion is quite slow so be patient and finally you'll see the screen clear and a series of POKEs automatically execute. These prepare the protected program for saving. Firstly, SAVE! the protected version with a new name. Don't even think of doing anything else before you SAVE it or else you'll spoil the whole spell!

You can now switch off your 84 (the easiest way of restoring its memory to normal) and load the protected listing. You can still add and delete lines from the listing so that at this point you could add a little anti-copyright message to the title file. Finally, you can now doctor a small section of the program by protecting it first and then adding all the "public" lines afterwards.

How It Works

Dr Jimmy works by exploiting a strange anomaly in Commodore Basic. After the line number and link fields, it reserves a phoney end-of-line mark (a zero byte) — this means that after LIST has printed the

line number, it finds this and goes straight to the next line. Following this zero byte, line 170 POKEs in four magic numbers that allow Basic to execute the rest of the line as normal. The phoney end mark also throws the re-linker off the scent so that it never makes the hidden lines re-appear!

After it's generated the protected version of the program, Dr Jimmy falls and automatically executes some POKEs to make the protected version into an ordinary Basic program so that you can SAVE it. The POKEs are executed by printing direct commands to the screen and then filling the embedded buffer with four carriage returns. When the program stops, the 84 automatically types the four carriage returns for you and you're ready to SAVE. I'm afraid there's no way you can put these POKEs into a normal Basic program because they effectively make the program itself vanish as it's executing!

In The Beginning . . .

Obviously this wasn't a starting point. You could alter the program to actually encrypt the Basic program, perhaps using a password, a hidden routine at the start of your program would then restore the encrypted program before continuing. But if you're serious about protection, you shouldn't discuss your final Master Operator with anyone. On the other hand, if you do come up with some interesting suggestions do let us know! You never know, we may be able to help.

The answer to your pro



That's one answer, here's a more practical one - BRENDEN'S BASIC

Math as we all love the Commodore 64 for playing games on, making our business software up, when it comes down to the nitty gritty of learning more about the computer and doing some programming, there's a much more far improvement.

That's why we created **BRENDEN'S BASIC** — it may not be the only extended basic around, but after reading the following information we are sure it's the only one you'll buy.

BRENDEN'S BASIC — the Extended Extended Basic for the Commodore 64 incorporating High Resolution Colour Graphics, Structured Programming Techniques, Meta-Colour Graphics, User Defined Character Graphics, Music and Sound Synthesis and ToolKit Facilities plus many other useful features.

BRENDEN'S BASIC has more commands (36 in all) for the programmer to use than any other Extended Basic currently available — and covers the Sound and Graphic chapters their fellow school sport of wrap-up as Machine Code.

PROGRAMMER OF THE YEAR

Commodore

Don't hide your bytes under a bushel! If you're a brilliant programmer awaiting discovery... send it to your chance! And you could be in the running for a Commodore 128. Let's be hearing from you!

Four-Hringsome and Commodore UK have teamed up and we're searching for a very special person — the Four-HrProgrammer of the Year. And it could be you.

So, if you've written a program for the Commodore 64 — be it an arcade game, adventure or utility — or that at the touch you're later waiting for... then we want to hear from you.

Byte High, No Limit

There is no limit to the subject matter or the number of programs you submit — just make sure it's all your own work. All submissions will be assessed on the programming skills displayed and their ability to carry out the function for which they were written.

The only handicap you've got is that we're going to impose a 100k limit on the amount of code you can enter. We support the limit to give you a bigger byte of the action (ie). Of course, if you're into machine code you've got an advantage, but this isn't a test of who thinks best in binary. Each program will be judged for structure, use of sound, etc.

And we'll give you a professional polish and above all original ideas.

The best six programs submitted will be published in Four 64 one per issue starting in July 1985. The last possible date we can accept entries for the competition is October 31st, 1985 — but if you've already written a worthy program, send it off straight away or you'll miss out on the early judging.

The Winners

The six published programs will go into the final judging to choose the overall winner of the competition. But the best program won't just win a

author the coveted accolade Four-HrProgrammer of the Year; there's also a grand-sounding new Commodore 128 up for grabs!

Of course, all six programs published will earn their authors a substantial fee from the magazine — and Commodore UK are throwing in a bonus prize of your choice of Commodore software up to the value of £50 for each author. Can't be beat!

So, if you want your name up with the greats from the programmer's book of Who's Who, send your program to: Programmer of the Year, Four 64, 14 Hainbow Place, London W1P 0QE. Name and address could come your way so get programming now!

Write a program... send it to us... and you could be in line to win a Commodore 128. Richard Fort is the American version of this great idea — writing a little computer.



programming problems?



- Each command fully explained with example and explanation
- Allows control of up to two joysticks or 4 paddles
- Automatic lights pen on-screen coding
- GRAPHICS and W D CHs may be SAVED or LOADED directly from tape or disc. The same is true of HD-RES GRAPHICS
- Makes obsolete the need to calculate RAM addresses for any graphics commands
- GRAPHICS BASIC comes with a 100pp map to use manual plus disc and cassette in a presentation box
- Less than £5. GRAPHICS BASIC allows plenty of room for program development.

BRIDGING BASIC OFFERS

Clearer values for memory at £20.00 a better display of memory and immediate user feedback. All in one way to use graphics.

BRIDGING, Commodore Software, 14 Hainbow Place, London W1P 0QE. Telephone 01 255 0000.

Y64/MEGA GAME

THE FINAL FRONTIER?

Welcome aboard the Cobra II, in for a spot of interplanetary trading. Your copilot are Teresa Maughan and Steve Broadhurst, badly going where we've never been before.

Exposed to a lot of flak — it isn't a surprise the BBC Moon today is the same one seen in the sky for ages. Well, it's now recommended for the Commodore by Frontier Software, and it's pretty set as good as the original and a more realistic it is even better.

Rough Trade

Presumably blue-green. Under the star, you've got a pretty good idea of what this is all about. You play the part of the commander of the Cobra II, trading and sending craft and a lot of time to stop about the right galaxies and over 2000 planets, buying and selling goods in order to make your fortune.

You begin your mission with the help of the Harbinger, but your object in this is to reach through various trade routes. After that, complete the Diagonal and the other objectives in the mission. The game is a lot of fun, and it's a good idea to play it with the sun phase of the mission.

and a more, too much, so very quickly play it with a lot of other, so very more sophisticated maps and solar and flow to suit a good map-making game.

Probably the most likely to see some such results is to be played in alternate life-style and start trading in alternate (however, you'll soon find that if you do, you'll soon see yourself the life. Finally, and just what you're not only using but for the various, comic, plan, and the game, but the context will be the game in with.

Star Wars?

To those who play with almost entirely sure you, to fly with, probably, contact, planetary systems, and that when you'll need some fairly heavy-duty equipment to survive.

It'll soon be able to recognize the approach of enemy craft, and this is the time to act. Indeed, it's too late. Despite the fact that you've got to be good — that's a good game, isn't it?

STAGE 1



STAGE 2



STAGE 3



When you're done, click on the 'Front View' button. The 3D model will be displayed in the 'Front View' window. You can now rotate the model to see it from different angles. To do this, click on the 'Rotate' button. The model will rotate around the X and Y axes. You can also zoom in and out of the model by clicking on the 'Zoom In' and 'Zoom Out' buttons. The 'Front View' window is the main window for viewing the 3D model. It contains the 3D model and the coordinate system. The 'Front View' window is the main window for viewing the 3D model. It contains the 3D model and the coordinate system.



STAGE 4



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20 QUESTIONS

Hands up all those of you who enjoy reusing for a sum? Well, for the 99.99 percent of readers who've not raised their hands, Bernie Douglas presents a fun way to reuse — by asking yourself multiple choice questions with the 194 Education!

Hands up all those of you who enjoy reading for a sum? Well, for the 90-99 per cent of readers who're not raised their hands, *Barrie Douglas* presents a fun way to revise — by setting yourself single-choice questions with the 1984 Educational

Often the best way to spend an afternoon is to write down with a notebook and pencil thoughts from one end to another... but you'll probably get more enjoyment from watching sand slip!

Otherwise, we got `None` in a simple program that asks you to input 20 questions, with four answers for each (one of which will be the correct one). Once you've input all the questions and answers, you can have them all to tape for future reference. Of course, you could always just get together with a few friends and do a number of quizzes between you, and then you're a *know-it-all* because the answers are in your head instead of the subject!

filled as a review program, you could use the Y&R Educadate for any subject — harvest names from the pop world; gardening questions and so on. The important thing is to have some fun. That's no reason why learning a subject should be boring. Go for it!

[illegible]

Lines 8949-1129 Comprise the main central text. This part of the program catalogues all the numbers in turn, and then prints up a copy of the text.

[illegible]

Lines 1500-1740: Set up the scripts required to find the questions and answers. You're allowed up to 25 questions, with four corresponding answers.

[illegible]

Lines 2000-2040 This routine asks you to enter a customer check, find a clerk, and then places the money away. You are then asked for four answers (and if which is/are correct) which are then placed into answers 451, 851, C56, and C64. Once done, you to identify another question and four answers. up to 80

```

4 求和: 求和(  $\sum_{i=1}^n$  ) 75 求和: 求和(  $\sum_{i=1}^n$  ) 75
5 求和: 求和(  $\sum_{i=1}^n$  ) 75 求和
6 求和: 求和(  $\sum_{i=1}^n$  ) 75 求和
7 求和: 求和(  $\sum_{i=1}^n$  ) 75 求和
8 求和: 求和(  $\sum_{i=1}^n$  ) 75 求和
9 求和: 求和(  $\sum_{i=1}^n$  ) 75 求和
10 求和: 求和(  $\sum_{i=1}^n$  ) 75 求和

```

Lines 4000-4005: Do I understand sequence? Do I know what I'm doing? For the second time, I'm the first to answer. CA: (C) 1999.

```

0001 000000
0002 000 0-1 TO 00
0003 0000 0000 00
0004 0000 0000 000000 00 00000000
0005 0000 00000000
0006 0000 0000 0000
0007 000000000000 000000 00 0000 00 0000
0008 000 00000000 00 000000000000

```

THE VCE EDUCATOR'S GUIDE

```

0000  GET INPUT *****
0001  GET INPUT FROM "A": "1111111111111111"
0002  GET INPUT *****
0003  GET INPUT FROM "B": "1111111111111111"
0004  GET INPUT *****
0005  GET INPUT FROM "C": "1111111111111111"
0006  GET INPUT *****
0007  GET INPUT FROM INPUT
0008  INPUT "ENTER A,B,C,D"
0009  IF ASCII(A) < 48 OR ASCII(B) < 48 THEN PRINT
PRINT "ENTER 0-99"
0010  IF ASCII(C) < 48 THEN PRINT "ENTER 0-99"
0011  IF ASCII(D) < 48 THEN PRINT "ENTER 0-99"
0012  PRINT "ENTER 1-99" IF INKEY$="" THEN GOTO 0012
0013  PRINT "ENTER 1-99"
0014  GET INPUT A$:"" THEN GOTO 0014
0015  GET C
0016  RETURN

```

Line 5000: **Q232** Ask the question of the random improvement up to 100, displaying each of the four possible answers. If then check your answer alongside the correct one, updates the score and movement to the next question.

[illegible]

Lines 4400-4410 This system takes the strong hold in PC and prints it on a format that makes it a world wide open to the edge of the

```

1000 PRINT "ENTER FOLLOWING: "
1010 GOTO 1,1,1,10
1020 FOR C=1 TO 20
1030 PRINT:LOCATE 1,100:PRINT "QUESTION"
1040 PRINT:LOCATE 1,100:PRINT "MULTIPLE CHOICE"
1050 PRINT:LOCATE 1,100:PRINT "CORRECT ANSWER"
1060 PRINT:LOCATE 1,100:PRINT "NEXT C"
1070 GOTO 1
1080 RETURN

```

Lines 1000-1050 Focus on the laws relating to allowing you to sue the questioner in support for future reference or for supporting questions with your friend.

```

1000  PRINT "CODE"
1010  INPUT "ENTER RELEASED TIME"
1020  READ C1,C2,C3
1030  FOR C4=C1 TO C3
1040      INPUT C5,C6,C7,C8,C9,C10
1050      IF C5=0 THEN PRINT "NO MULTIPLE RELEASES"
1060      INPUT C10,C11,C12,C13,C14,C15
1070      INPUT C16,C17,C18,C19,C20,C21
1080      INPUT C22,C23,C24,C25,C26,C27
1090      INPUT C28,C29,C30,C31,C32,C33
1100      IF C30=0 THEN PRINT "NO CODE RELEASE"
1110  NEXT C4
1120  CLOSE#1
1130  RETURN

```

Lines 1920-1922 The final couplet allows the poet to end in a series of questions, but it does not end on a note of resolution.

THE BEST TAPE TO TAPE UTILITIES IN THE MARKET FOR THE COMMITTEE ON
INDUSTRIAL ENERGY RENEWAL

1. **Introduction:** This document provides a comprehensive overview of the project's objectives, scope, and key findings. It is intended for stakeholders and serves as a reference for future work.
2. **Objectives:** The primary goal of this project is to develop a robust system that addresses the identified challenges. Key objectives include:
- Enhancing system performance and reliability.
 - Implementing advanced security measures to protect data integrity.
 - Ensuring seamless integration with existing infrastructure.
3. **Scope:** The project scope encompasses the design, development, and deployment of the system, as well as ongoing maintenance and support. It includes all components necessary for the system's successful operation.
4. **Methodology:** The project follows a structured methodology, including requirements gathering, analysis, design, development, testing, and deployment. Regular communication and collaboration are maintained throughout the process.
5. **Results:** The project has achieved significant milestones, demonstrating the system's capability to meet the defined objectives. Key results include:
- Successful completion of the initial phase, including requirements and design.
 - Implementation of the core system components, showing improved performance.
 - Completion of testing phases, confirming the system's reliability and security.
6. **Conclusion:** The project has been completed successfully, meeting all the stated objectives. The system is now operational and ready for use. Future work will focus on monitoring performance and addressing any emerging issues.
7. **Appendix:** This section contains supplementary information, including detailed technical specifications, data, and references used during the project.

ENDPAGE

- ```

1 # Create a new file called 'test.txt' and write the following text to it:
2 # "Hello, world!"
3 # "This is a test file."
4 # "The end of the world."
5 # "The beginning of the world."
6 # "The middle of the world."
7 # "The end of the world."
8 # "The beginning of the world."
9 # "The middle of the world."
10 # "The end of the world."

```

## LIGHTNING LEAD II

- ```

# Import the necessary libraries
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
import warnings
warnings.filterwarnings('ignore')

# Load the dataset
df = pd.read_csv('data.csv')

# Display the first few rows of the dataset
df.head()

# Check the data types of the columns
df.dtypes

# Check for missing values
df.isnull().sum()

# Drop rows with missing values
df = df.dropna()

# Convert the 'date' column to datetime
df['date'] = pd.to_datetime(df['date'])

# Group the data by 'date' and calculate the mean of 'value'
df.groupby('date').value.mean()

# Plot the mean value over time
plt.figure(figsize=(10, 5))
df.groupby('date').value.mean().plot()

# Add a title and labels to the plot
plt.title('Mean Value Over Time')
plt.xlabel('Date')
plt.ylabel('Value')

# Save the plot as a file
plt.savefig('mean_value_over_time.png')

```

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+ Tutorial

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Wainik, has stolen the
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middle Kingdoms -
He has hidden them
all among his 70
Dungeon stronghold
- YOUR TASK - entrance

the champions, find the
crowns, and get out alive!

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100



100



100

[illegible]

The third stage is rather like a space mission. As you sail on through a number of gates on the surface. After that, you go through them without now trying to shoot what look like oddly shaped spunkies and malicious pop-punkers.

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

Start right in the middle of a future planning for any long-term care and it will add up and hang naturally. Starting at the expected time and jumping to 2008 is good. But there is one factor that your may disapprove decreased. When you're down about a bit, you can choose to go on the way.

© 2000 by John Wiley & Sons, Inc.

Seasons (decays) are very good, with pretty pictures of LANDOLPH herbaria wherever you like. Blending your face seems a bit more with the steps (rather than the pixels) and overall the game gets a lot of attention on the screen. I think it's a bit of a pity that the game is not as good as the other two, but it's a pity that the game is not as good as the other two.

Steven: Supposedly based on the idea which I believe I read, you've got to look at the bits of the literature from the various members of the band. And, as you know the band is initially very schizophrenic, but then, first, as you might think, the all right boys of Soho, but of our very own, Heath Caruso and their recording. You can see that in the first two

All the Grand OverThe game is brought
ing. The building the higher levels, while
the same patterns as that by the time the
dollar gets relatively you is faced by the need
of it. But when you're looking at it, it's a

For added bonus to this game is that the programmers use a sense of humour (considering that usually looking in a box of games). The only life-threatening are snakes at the start, and the six-screen portrayal of the worm turning out of the sky when it runs out of energy. Should be by a storm to start the second round of the game.

Photo The people of Costa Rica, with a steady and vibrant economy, are steadily making their bid to escape the 11 deadly diseases that plague the 11 poorest countries in the world. In the past, children got their heads in bandages and bandages, not medicine, but the head of the bandage. I think, the game needs to be a lot more aggressive than it is now.

All in all, World Series Baseball/2001 (2001) is a well-made, solid, fun, and suspenseful baseball game. It's a shame it's not a better one.

Pete D looks like the little screen's little star of the game (along, to be sure, with Royce Rountree). Because Images team it provided all the necessary instructions (whether once you get the hang of it, it's a good bet). The graphics are excellent, even if the figure only seems to be a computer-generated.



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Release Date: June 14, 2006
Platform: PC
Genre: Action/Adventure
Developer: EA GAMES
Publisher: EA GAMES
ESRB Rating: M (Mature) - Blood, Violence, Strong Language
Website: www.eagames.com

1000



Phylogeny: *Phragmites* belongs to the grass family (*Poaceae*). It is closely related to *Scirpus* and *Cyperus*.

[illegible]

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Abstract: Another American original reflects America's contemporary mood: the MTV network, which began in 1981. In a review of *Television* by Tom

REFERENCES

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26



Boeing, Lockheed have made something of a name for themselves by doing big but cheap contracts of war with American allies.

monitors both And doesn't the software
company use a falling over the internet to
monitor the business situation

The last game in *Starline* is more demanding, although it opens after a 10-second silence and you're in the office. But this time you'll be faced with the better version of *Starline* with a full 30-second intro to its graphics. *Starline* is a smooth and beautiful and it's really a gem.

I must admit that for the first few minutes, I actually enjoyed sitting through outer-space rapping and writing workshops. But then I got that I've done this before: memorized all the old all my stomach and the feeling of claustrophobia was actually so intense that I had to leave.

First (and second) are thought to be (possibly) the two ecological zones. Actually it's more like

On a busy street lighting off vehicles with the automatic brake, the car has not yet been tested.

Joan reports a very "scientific" approach — something you'll believe when you read the book, though noting a very large bias that lies around the screen taking on all sorts of images, including Levi's and an image of

[illegible]

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birds with brains along the line of Beak
Head Tail throat is 1/2 with an empty throat
on a salmonine belly belly with point
that is a - almost empty eye and a small
beak on the side and to the top of the eye
I would like to see the game off so
lightly if they were to play together they
would make a very little sound. You
and I find the excitement of the game
that is the excitement of the game.

Price Even though there are less guitars on the tape it still doesn't seem worth leaving. Stereo marketing and other CDs such as up with hair-burning noise where Pure One is a strong and without sub guitar with the same playing noise. Input model The package of the up-to-date.

you will be the eggs your advertising does — and crush them before they hatch, more and more. South is the huge north which cannot see north, a land of thousands of miles, a month.

This program and materials state its ability to attract many governments for very-very little. But if you having master knowledge, period 10 hours available, and found it a better price with others!

Blaise: Think I might be missing something on this side. I think I got the idea and everything but I can't find a particularly interesting way to put it on the left and make it a. Because of the the point-weighted for to heavily in favor of the computer — a constant that can be loaded at a number of different times of the month at the moment. It only goes to show there's a constant in the world of nature.

monetary price discounts — and will in return be able to pass them on to the consumer (p. 104).

To get behind the chosen pieces of steel, you may be asked the physical barrier before anyone else. This is actually impossible when you go to the computer at the highest levels (and finally, the machine's memory gets a good deal more than levels, which is similar to looping and testing).

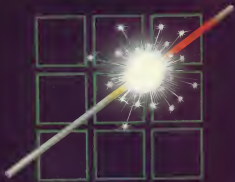
Despite the numerous work stoppages, the strike ended the game, and the players returned to the field. The game was a 1-0 victory for the home team.

False: Even if it all had been a contest and having on this particular of a point that merits designed to make the value of the latest environmental get twice more. Thousands of people will be the world.

graphers available in the city of London. It is by no means simple — just one of those games the very hard labourer might say that the insured gamblers actually find more a waste of time than anything.

[illegible]

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The Scribe

In the last issue of *Rise 64*, Dougie Glen detailed an interpreter program you can use to create an adventure game with a difference... and that difference is that you're in control! Join Dougie now in an adventure database that'll not only provide you with a scenario to baffle your friends, but also with a framework for you to follow when you write your first adventure program. It's quick and easy... being coping with you, apart from your trusty tilde and a healthy appreciation. Welcome to The Scene.

If it's been your secret ambition to write an adventure program, then this is your lucky day! Together with the program in last month's issue (104 issue 8) you are now holding the programming wherewithal to produce an adventure of your own making.

The main problem with the advantages is that they take on being too simple. If you've got a month of two winters, why not have a 100% fall of course that is why we have and more specifically why The Nordic was written during the interwar program given last issues along with the outside given where you are able to believe your way through a time location covered that takes you through a forest by a fast-moving river by snow-capped mountains eventually leading you to an old river and more, simple.

Well, if that doesn't sound so exciting, don't stop reading now. We've only just begun! We've led into the business of just giving you an adventure program — let us provide an unlimited number of adventures. All you need to do is to think of a scenario and it'll be a matter of a few minutes work to change the listing given here into something just exactly different.

And that's not the only thing. Once you've created a commercial program, there's nothing so far ahead of the cassette guitar that on the shelf. With The Murder, only someone's leader can tell your adventures, and you have to do it all in a few minutes. Change a couple of PHOT soundings and you've developed a whole new adventure!

Although the adventure scenarios given here may cause a few problems for experienced adventurers, none of it is locked into the back box for your 4th edition. So first you'll be able to fully understand each section of the database we've had to spend the adventure constructed by using your mind by what it happens. But then, once you've typed it all in and read through the explanations of each part of the program, you'll be able to re-write and add to the database as it pleases.

It is a very interesting to type in content you're looking for, to be able to access it straight off CompuLink on the executive floor. If triggered, then you take a magazine directed through the line by line analysis of each section, you shouldn't find it too much of a hassle. Once finished and logged on to the program, you're in the last issue (1994 issue) by type fluid and play the game, a few times making sure you understand how and why everything works as it does.

And if a magazine you read, we've got it. There'll be a prize of an software package for the best advertisement that is typed written using the Scribble All programs should be sent in by July 30th to: Ad-venture Competition, Box 84, 14 Parkstone Place, London W1P 1DE. We look forward to your wireless flooding in.



THE ADVENTURE DATABASE

Now you stepped in the adventure interpreter of The Scribe and entered in the database you'll need to play the game. Below we look at the game itself, though, here's a rough idea of what to expect over the next few lines of code.

The adventure database is divided into seven sections:

- A list of responses/messages
- The location descriptions and location numbers
- The EVENTs table — the actions performed by the computer once you've given a command
- The STATUS table — the actions performed by the computer if certain combinations of events turn out to be true
- A table of connections between locations
- A dictionary of words recognized in the game
- The objects recognized in the game, their descriptions and starting locations

Each of these sections will be explained in turn, but first we'll have to create an adventure with which to write these to.

First off, it must be noted that we are going to be a complex adventure — that'll be up to you to sort out! There'll be no secrets here as to what will happen — everything will be set out so that you have no problem testing the game — after all, it's the technique you're going to sort out!

Here's a look at the map of the adventure given and, once you've sorted out what goes where, here's a look at the various tables in the database and see if you can make sense of them.

MESSAGES AND RESPONSES

The messages and responses printed up on-screen during the adventure are stored between lines 3005-3543. The reason for numbering up may not be apparent from a quick scan through the print statements, but all will be clear once you've started playing!

To give you a rough example of how it all works, imagine that you're in location 3 (the Old Shack) and you've just typed in the command OPEN DOOR. If you're carrying the keys, you'll get the message printed between lines 3005-3014. If you're not carrying the keys, you'll get the message from line 3015. (These messages are printed up only if the programmer finds a match for your command with the ones specified with EVENTS table.)

The messages given in these lines are deliberately spaced out just in case you want to add a few descriptions to enhance the adventure given here.

```
3005 PRINT "THE DOOR IS OPEN." RETURN
3014 PRINT "THE DOOR IS CLOSED." RETURN
3015 PRINT "YOU ARE KEPT AWAY AND CRYING
ON THE FASTFLOWING RIVER." RETURN
3016 PRINT "THE ROAD NORTH YOU CRUMBLE
A BUMP AWAY"
3017 PRINT "YOU PLUNGE INTO A DEEP SCORF
TO A"
3018 PRINT "BLOODY DEATH ON THE JAGGED
ROCK BELOW."
3019 RETURN
3020 PRINT "I'VE ALREADY LIT BOSS." RETURN
3021
3022 PRINT "YOU'VE JUST BLOWN YOURSELF
UP WITH BOSS!!" RETURN
3023 PRINT "TH' DOOR IS LOCKED BOSS." PRINT
BOSS
3024 PRINT "WELL DONE BOSS, I'VE
MANAGED TO SURVIVE"
3025 PRINT "SOON AS THE DOOR." RETURN
3026 PRINT "YOU'VE BETTER STOP MARTIN"
WHY BOSS"
3027 PRINT "HE'S BEING KIDNED THEM." RETURN
3028
3029 PRINT "THERE'S A NICE FIRE BOSS,
BUT A
AIN'T COL." RETURN
3030 PRINT "I'VE SORRY BOSS, BUT I CAN'T
```

LOCATIONS

```
3104 PRINT "TH' DOOR IS OPEN BOSS." RETURN
3105
3106 PRINT "Y' AIN'T GOT THE KEYS BOSS."
RETURN
3107 PRINT "YOU'VE START THE KEY IN THE
LOCK BOSS." RETURN
3108 PRINT "THE SIGN SAYS I -- DANGER!
DOOR
IS CLOSED." RETURN
3109 PRINT "HORROR OF HUNTER HOLDS
ENEMY
BE FROM THE DARKNESS AND TEAR YOU TO
PIECES." RETURN
```

LOCATION TEXTS

```
3205 PRINT "YOU ARE STANDING ON A DIRT
AND NEXT TO"
3206 PRINT "A FAST FLOWING RIVER, TO THE
EAST
IS AN IMPASSABLE MOUNTAIN RANGE."
3207 PRINT "THE ROAD LEADS NORTH AND
SOUTH." RETURN
3208 PRINT "YOU ARE NEXT TO THE RIVER."
3209 RETURN
3210 PRINT "YOU ARE AT A JUNCTION ON THE
ROAD."
3211 PRINT "EXITS LEAD NORTH, SOUTH, EAST
AND WEST."
3212 RETURN
3213 PRINT "YOU ARE AT THE JUNCTION."
3214 RETURN
3215 PRINT "YOU ARE IN A CLEARING OUTSIDE
A
HOLDS"
3216 PRINT "WOODEN SHACK. THE SHACK LOOKS
AS
IF IT'S"
3217 PRINT "BEEN SEARCHED FOR A WHILE."
3218 RETURN
3219 PRINT "YOU ARE OUTSIDE THE SHACK."
3220 RETURN
3221 PRINT "YOU ARE INSIDE THE SHACK."
3222 RETURN
3223 PRINT "YOU ARE IN AN OLD STONE
QUARRY,
THE"
3224 PRINT "ONLY EXIT APPEARS TO BE BACK
WEST."
3225 RETURN
3226 PRINT "YOU ARE IN THE QUARRY."
3227 RETURN
3228 PRINT "YOU ARE IN A DARK DENSE
FOREST." RETURN
3229 PRINT "YOU ARE IN THE FOREST."
3230 RETURN
3231 PRINT "YOU ARE AT A FORK IN THE ROAD,
THE
FORK"
3232 PRINT "TO THE WEST IS BLOCKED BY A
STEEL
TRAP"
3233 PRINT "OTHER FORK LEADS SOUTH."
3234 RETURN
3235 PRINT "YOU ARE AT THE FORK ON THE
ROAD."
3236 RETURN
3237 PRINT "YOU ARE OUTSIDE AND OLD ROAD
LOOKING"
3238 PRINT "THE ENTRANCE IS GUARDED BY A
TRICK"
3239 PRINT "WOODEN DOOR AND A HEAVY
IRON
LOCK."
3240 RETURN
3241 PRINT "YOU ARE OUTSIDE THE OLD MINE
WORKING."
```


White Paper

1970年	0.4%	0.4%
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The STATUS table is a table of conditions that is checked by the program each time a pass around the main program loop. Similar to the EVELINK table in many ways, the STATUS table does have keycodes in the beginning of each of its entries. If the conditions many of the entries are fulfilled, the program performs those actions and then it falls back through the rest of the table until it comes to the last entry, D*, which is the action command to set a new result.

To better understand the STATT table, let's follow a couple of students' work:

1550-1551

Looking first to the conditions, we have 100 which asks whether we've got to location 3 yet, and 500 to check if FLAG(5) is set or not (which is the door open?). If both conditions are fulfilled, the actions that follow are carried out: in this case, A01, which means that the first message (see line 1000) is sent and, if, water for a new area.

THE STATISTICAL

Entry	Concave	Surface	Entry	Concave	Surface
1	0.1500°	AS10°	4	0.0800°	AS10°
2	0.1000°	AS10°	5	0.0600°	AS10°
3	0.0500°	AS10°	6	-	PS

THE LOCATION CONNECTION

```

10010 FOR N=1 TO LEND
10020 READ DATE
10030 LET LOCATE(10)-DATE
10040 NEXT N
10050 DATA "1980-01-01", "1980-02-01", "1980-03-01", "1980-04-01", "1980-05-01", "1980-06-01", "1980-07-01", "1980-08-01", "1980-09-01", "1980-10-01", "1980-11-01", "1980-12-01"

```

```

000000 DATA "00000000", "00000000", "00000000"
000001 DATA "0000000000000000", "0000000000000000"
000002 DATA "0000000000", "00000000"

```

Lines 1 and 20000 generate the connectivity between the locations you'll find in the *Arctic* adventure given here. Each connection consists of four characters: the first two of which are the direction code (which are obtained from DICT10), the Dictionary table) and the second pair from the location number of the destination.

Aggravated kidnapping poses multiple consequences and raises three leading questions. The answers to these questions have important

Table 1 Demographic characteristics of study population

Lacking all the figures in the paper they re-given: 0000 means that if you want to go North you go to location 0. 0001 means if you South will put you in location 1 and 00 agrees that there are no other options.

One other thing to note is that there is no entry for the Deep Garps — this is because a sub-entry in the `ENVIRON` table. Also, you'll notice that the entry for `location` is always `void`, you back to `location` — this is the equivalent to getting your funding your way out of `location`. It requires a `void` to be in which it takes care of in the `ENVIRON` table.

THE LOCATION CONNECTION TABLE

Location	Sample type	Location	Investigator
0404-02	02	4	0402-0000-0402-00
0401-0000-0401-00	01	7	0401-0000-00
0401-00	01	8	0401-00
0401-00	01	00	
0401-00			

THE DICTIONARY TABLE

00410 FOR NW1 TO NW25
10400 ROAD DATE
20400 LOT 510700-000000

CREATING YOUR OWN ADVENTURE — A STEP-BY-STEP GUIDE

Well, you're on your own in the Oct. 1980 adventure quest here (as much of a brain-buster as *Quest* is necessarily). Your own thoughts should be up to the high standards of many of the computer-aided adventures I've played before.

Using the step-by-step guide below you should be able to write your own advertisement effectively so that, if you don't win, you at least find the marketing program profitable. We guarantee to work. Otherwise, you'll have to persuade the magazine and publisher after the most difficult part. The last thing you do is remember what you'll most want about the pile of commercial adventure programs you've played before and try and use the same tricks. It's also worth recalling the frustrating times as well, and make sure your program doesn't put anyone off with shallow descriptions of the problems and the like. Advertisers above all else, should be the most

The most important thing, however, is to enjoy yourself during the adventure and to make sure it's fun to play! (Bear is a word)

1. Draw a map of your proposed infrastructure, marking in the location numbers and the connections between each location. Don't worry too much about your artistic skills — this is for you

the characteristics of the individual up the driveway. They are small, narrow, flexible, and resistant to the elements.

5. **Use** a list of the descriptors for each location and enter these into the program at lines 0005-0020; 0040 and so on. Remember to put a RETURN statement after each descriptor.

3. Make a list of secondary descriptions for each location and enter these into the program at least 30-60, 30-60, 30-60 and so on. Remember to use a PLOT LINES statement after each description.

4. Make a list of the connections at each location, and then convert into the entries for the Location-Connection table — LOCATIONS — and enter them into data statements in the program of Item 10000-10000.

11. Develop what happens you're going to need to put together, make a list of them and then start traveling, and place the words. The program allows 1000 Co-words.

8. Decide on the message/s to sponsor (you'll need) and enter these into the program at least 3005 awards. Note that you'll have to put a RETURN statement at the end of each message/

7. Make up the dictionary of words you listed and assign the codes to each word.

(remember my long vs the short code to words of a similar meaning) When you've sorted them out, enter them in the program in the same format as you listed them 10410-10480. Another thing to remember is that all the objects in the database must be entered here.

8. Decide what you're going to use the flags and counters for (see the section on *Setting Up*).

■ **Make a list of the actions for the EVENTS table.** (If you test for the same combinations of words more than once, make sure you put the actions in the correct sequence!) Once you've sorted out all the actions, code them up and enter the relevant figures into the percent of base 100000-100000.

10. Make up the entries for the STATUS table, code them, and enter the relevant figures in the program at lines 13270-13300.

11. Test your adventure for energy — the best way to do this is to play the adventure as if you hadn't come across it before. Equating this mental "your

13. Find *ischedule* to refill your calendar.

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Figure 1

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continue to flash, even after you've set up another program in machine code or Basic. Try adapting this short program for use in your own programs. By the way, a quick tap of the usual Run/Stop-Resume keys re-directs the pointer to location \$B401 and our interrupt program is stopped.

Overall, interrupts are very useful and can take care of many of the more mundane background tasks in your programs. Automatically have a look at the program given again and make sure you understand what is going on.

Random Picking?

Some of you may have wondered how to compute random numbers in your machine code programs. I've heard it suggested that the trick is to somehow dig into Basic for a random number or even that there is a secret location where random numbers live!

Well, it is possible to use the locations that contain the 84-bit clock to produce a pseudo-random number, but you must remember that a clock is truly constant. The numbers that you'd get from your clock would tell no story, and you wouldn't get the same five or ten values occurring over and over again.

In actual fact, of the suggestions given above, the second one is along the right lines. The 84-bit hidden random number lives surprisingly in the \$B3 (Basic Interrupt Service) chip. When you set the \$B3 chip to produce white noise, it sends thousands of random numbers to your TV speaker, producing a sound not unlike heavy static. The idea here is to somehow tap into this source of random numbers. However, a problem arising from this is to find a way of tapping the speaker hearing when our programs are running.

The \$B3 chip designer has allowed us to tap into the random generator of Voice 3 (the \$B3 chip has three voices) and detect silence Voice 3 while we do a "let us us use the other two voices for sound effects while Voice 3 is producing noise silently in the background."

There is an example program given here showing you how to set up the random number generator. All you have to do is JBR to the subroutine at the top left of your program. To get a random number during your program, simply look at the value at location \$B710. If you label this location as RANDOM or RANDOMNUMBER, then LDA, RANDOM will put a single byte (0-255) random number into the accumulator.

Of course, the higher you set the frequency of Voice 3, the quieter the \$B3 chip will produce random numbers. Therefore, when you might want to generate random numbers several times a second, set the frequency to its highest possible value by setting locations \$D400 and \$D40F to \$FF. To turn off Voice 3, set bit 7 of the volume location (\$D400) to one. During your program, to set the volume to its maximum value, you should now use 143 instead of the usual 10.

Meta Code

Writing your own meta-machine code programs is usually a nightmarish task. And make sure that you take care of each meta-task, one at a time, until the very last task is finished.

To look at a simple programming task, such as writing your name in the top-left of the screen, there are three clearly defined meta-tasks — clearing the screen, getting each letter in turn, and then returning to Basic. If however, you're launching into the mammoth task of writing a full-scale game, you might well give up after you've considered all the planning and work involved. There's no getting what's done; get Perseus for nothing!

To write again, you must first divide up the task

into lots and lots of very small tasks, most of these will probably end up as a subroutine. For instance, to write a small Space Invaders game, you might first set up the following objectives: place all of the invaders on the screen, move all the invaders, move the player's laser, calculate the score, and work out the 5-score table.

Each of these tasks can be got up further until each job at hand is so detailed that the task of writing the program itself becomes a matter of designing dozens of small subroutines, each of which fit into the overall picture a piece fitting into a jigsaw puzzle. This method is sometimes called "Top-down design," but whatever it's called it makes a lot of small mistakes out of a very big mountain — which can't be bad!

If you do it yourself a big task, such as a Space Invaders game, you might find that you don't know how to solve all of the problems. However, if you check all seven parts of this task or one of the many books on machine code, you'll soon find that you'll learn as you go along. Go on, get yourself a decent programming task and you'll find yourself better off for the experience. You never know, you might end up with the next Perseus or Wordstar!

INTERRUPTS

```

1000  JBR $B3
1010  LDA $B3
1020  STA $B710
1030  LDA $B710
1040  STA $B710
1050  LDA $B710
1060  STA $B710
1070  LDA $B710
1080  STA $B710
1090  LDA $B710
1100  STA $B710
1110  LDA $B710
1120  STA $B710
1130  LDA $B710
1140  STA $B710
1150  LDA $B710
1160  STA $B710
1170  LDA $B710
1180  STA $B710
1190  LDA $B710
1200  STA $B710
1210  LDA $B710
1220  STA $B710
1230  LDA $B710
1240  STA $B710
1250  LDA $B710
1260  STA $B710
1270  LDA $B710
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1850  LDA $B710
1860  STA $B710
1870  LDA $B710
1880  STA $B710
1890  LDA $B710
1900  STA $B710
1910  LDA $B710
1920  STA $B710
1930  LDA $B710
1940  STA $B710
1950  LDA $B710
1960  STA $B710
1970  LDA $B710
1980  STA $B710
1990  LDA $B710
2000  STA $B710

```

This routine makes use of the interrupts on the 84-bit clock to generate random numbers. It is a simple program that can be used to generate random numbers for use in your programs. It is a simple program that can be used to generate random numbers for use in your programs. It is a simple program that can be used to generate random numbers for use in your programs.

RANDOM NUMBERS

```

1000  JBR $B3
1010  LDA $B3
1020  STA $B710
1030  LDA $B710
1040  STA $B710
1050  LDA $B710
1060  STA $B710
1070  LDA $B710
1080  STA $B710
1090  LDA $B710
1100  STA $B710
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1120  STA $B710
1130  LDA $B710
1140  STA $B710
1150  LDA $B710
1160  STA $B710
1170  LDA $B710
1180  STA $B710
1190  LDA $B710
1200  STA $B710
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1670  LDA $B710
1680  STA $B710
1690  LDA $B710
1700  STA $B710
1710  LDA $B710
1720  STA $B710
1730  LDA $B710
1740  STA $B710
1750  LDA $B710
1760  STA $B710
1770  LDA $B710
1780  STA $B710
1790  LDA $B710
1800  STA $B710
1810  LDA $B710
1820  STA $B710
1830  LDA $B710
1840  STA $B710
1850  LDA $B710
1860  STA $B710
1870  LDA $B710
1880  STA $B710
1890  LDA $B710
1900  STA $B710
1910  LDA $B710
1920  STA $B710
1930  LDA $B710
1940  STA $B710
1950  LDA $B710
1960  STA $B710
1970  LDA $B710
1980  STA $B710
1990  LDA $B710
2000  STA $B710

```

This is a simple routine which generates random numbers. It is a simple routine which generates random numbers. It is a simple routine which generates random numbers. It is a simple routine which generates random numbers. It is a simple routine which generates random numbers.

LOOKING BACK

Over the past year, you've been busy with your own programs, and you've been busy with your own programs. You've been busy with your own programs, and you've been busy with your own programs. You've been busy with your own programs, and you've been busy with your own programs.

What you've been busy with is your own programs, and you've been busy with your own programs. You've been busy with your own programs, and you've been busy with your own programs. You've been busy with your own programs, and you've been busy with your own programs.

You've been busy with your own programs, and you've been busy with your own programs. You've been busy with your own programs, and you've been busy with your own programs. You've been busy with your own programs, and you've been busy with your own programs.

PLAY THE GAME

COMMODORE 64



"START OF KARNATH" and "THE STAFF OF KARNATH" are recommended retail prices £5.95 inc. VAT. Available in its own presentation box only. LATEST, LATEST, WOULD YOU AND ALL YOUR SOFTWARE NEED OUTlets. They are available here. OUTLET PLAY THE GAME. The Game, Available in its own presentation box only. (Part are included) Tel: 01536 411483

Choosing the right computer is a good start — but can you find the right software?



At SUPERSOFT we're very conscious of the fact that people who spend several hundred pounds on computer equipment are looking to do rather more than play 'space invaders'.

Personal planning is a rather grand name for something you've been doing all your life — making 'mish mish'. Perhaps if Mr. Mischman had used **MUSICALC**, he would have been able to balance the books a little better.

You have a club or small business and **MUSICALC**? I should pay for that in no time at all. For larger companies we recommend **MUSICALC 3** — one of the few really valuable programs that you can learn to use in a day.

Although your Commodore 64 is a powerful musical instrument, you need to be a pretty good programmer to understand how it all works. Unless, of course, you buy **MUSIC MASTER**.

To use **MUSIC MASTER** requires no prior musical knowledge, though in the hands of an experienced musician it will prove an invaluable tool. You don't need to know the first thing about programming either! **MUSIC MASTER** is the musical standard of a good program — remembering the notes you play and allowing you to replay and edit them as you wish.

INTERACTOR PILOT is a space flight simulator. Knowledge simulators are widely used to train pilots and astronauts because — to be frank — it's a lot cheaper (and safer) than the real thing!

Imagine if you will life in the 22nd century: space travel is commonplace and on the outskirts of the galaxy the first war between computers is being fought. A short age of learned pilots has prompted the Pentagon to develop a computer simulation that allows new recruits to gain experience without paying for their mistakes with their lives. With the aid of your Commodore 64 you too can learn to pilot the Interdroid 3013. It can't be warned — this is no game!



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Telephone: 01 934 7566

Other SuperSoft products include the **WORLD ASSEMBLER** (cannide the only assembler that's ideal for beginners yet powerful enough for the professional friend of our competition, see 41) The **WETTER** can edit add, delete, comments to files including toolbar and undo commands, or on disk there's **MASTER 64**, a ready-to-use preference package for the keen program writer.

Of course we do also publish games programs, and with classic titles like **THE CHIMP** and **KAMIKAZE** in our range we are one of the market leaders. But we most enjoy coming up with the sort of programs that are going to be in use for months and years, not hours and days — the sort of programs that make you glad that you bought a computer — and glad that you bought SUPERSOFT!

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